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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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GOVERNMENT REPORT ON NAVIGABLE WATERWAYS THROUGH ILLINOIS.

The chief of engineers of the United States Army this week transmitted to Congress the report of a preliminary survey on a 7-ft. and an 8-ft. channel between the Great Lakes and the Mississippi river. Two routes were considered: one by way of the Calumet river and the Sag river, to the Chicago drainage canal, and the other by way of the Chicago river and the Chicago drainage canal, the former utilizing only about 10½ miles of the drainage canal. The board of survey, which has been at work on the proposed waterway since last November, recommends the construction of a canal from Lockport, the terminus of the Chicago drainage canal, to the Joliet basin, and from the Joliet basin, to a point on the Illinois river below the mouth of the Kankakee river. It is stated that a canal 10 ft. deep, 100 ft. wide at the bottom, with fixed projections giving 22 ft. clear head room, and with locks 40x260 ft., would conform to the requirements of the river channel, 8 ft. deep at extreme low water. This would provide for the largest barge traffic likely to reach this route. To decide on the best location for a canal, whether to enlarge the Illinois and Michigan canal or adopt an independent line, will require a careful and extensive survey, which the board has undertaken to make. The provisional estimate for the enlargement of the present canal, but without the knowledge which the boring test pits will give, is taken at $100,000 per mile, exclusive of locks, culverts and the means of crossing Dupage. From the Joliet basin to the end of the drainage canal at Lockport the line requires three locks of 12 ft. lift each and a great lock at the entrance to the canal, the estimated cost being $562,000. The canal for this line has a rock cut throughout and must be mainly carried in a retaining wall against the bluffs on the right bank, the total estimate being $596,400. This line however, involves two crossings of the spillway of the drainage canal, with probably a dam at each, and within the narrow channel now considered it is thought that the line could be located to the left of the spillway at an estimated cost of $770,000. From what is now available an estimate is submitted which, while only approximate, is considered by the board sufficiently large to provide the work outlined under the most adverse conditions that may arise. Beginning at Utica, a lock and dam with a lift of 15 ft., estimated at $460,000, must be constructed. From this lock to the head of the pool the depth increased by the flow from the drainage canal will be not less than 8 ft., but to insure this depth during the possible suspension of this flow an estimate for rock excavation at the head of the pool costing $200,000 is provided. As the increased velocity of current in the river, due to the increased overflow from the drainage canal, will cause a caving of the banks, thus widening the river and producing bars in the main channel, the board also submits an estimate of $25,000 per mile for protecting the banks and confining the river to its present width. The board estimates the cost of an 8-ft. channel at $10,400,000 and of a 7-ft. channel 10 per cent less.

FUELING SHIPS AT SEA.

In a pamplet issued by the Lidgerwood-Miller Marine Cableway Co., describing an invention for transferring coal, ammunition, supplies and provisions from ship to ship at sea, it is stated that eleven ships were blockading Santiago—but when the Spanish fleet came out three were absent off station "coaling ship." They were at Guantanamo, 45 miles away. In the United States civil war, one-quarter of the vessels blockading Charleston, S. C., were alike away continuously coaling in smooth water. Thus we see, at Santiago, $5,000,000 worth of United States war vessels useless at the great crisis—and all because the colliers could not deliver their coal at sea. Can it be disputed, therefore, that the fighting efficiency of a blockading fleet will be increased by one-third, if waited upon by colliers capable of coaling at sea?

THE FRENCH NAVY.

M. Lockroy, ex-Minister of Marine, France, has drawn up a scheme to lay before the Chamber of Deputies, by which the emergency credit for the increase in the navy shall be advanced to 100,000,000 francs a year, so as to enable the new building programme of the Government to be completed within two years, with the additional construction of the whole fleet of submarine and special coast and colonial defence ships.

TO MAINTAIN LAKE LEVELS.

On Wednesday representatives of the Lake Carriers' Association and the "Soo" Water Power Co., will give testimony at Washington upon the regulations necessary for the control of the "Soo" power canal, now under construction. The meeting was arranged because objection has been made to the Sheldon bill, which provides for the regulation of the canal.

"This matter of regulating the "Soo" power canal is of vital importance to shipping interests of the Great Lakes." Maj. Symons, Corps of Engineers, U. S. A., stationed at Buffalo says of the question. "It is of much greater importance than that of the Chicago Drainage canal. Every man familiar with shipping on the lakes knows that vessels passing through St. Mary's river regulate weight of cargo in accordance with the depth of water there. When the water is deep in the river, vessels can load deeper and make greater earnings, but when the water is low, earnings of vessels are decreased proportionately.

"The "Soo" Power Co., will naturally endeavor to secure legislation which will hamper them as little as possible in their operations. It is for the Lake Carriers' Association to see that the Sheldon bill provides for regulating the flow of water through the power canal so that the usual depths of St. Mary's river will be preserved.

"Another matter of equal concern is the proposal to enlarge the power canal on the Canadian side. This makes an international commission an absolute necessity. If the arranging of an international commission is impossible until the High Joint Commission is either through with its work or is dismissed, then the two governments should be urged at once to put engineers at work to investigate the influence of power canals upon navigation in St. Mary's river, the engineers to report to the High Joint Commission, or to the governments direct."

WATER TUBE BOILERS IN BRITISH NAVY.

The first Lord of the British Admiralty was recently asked if he could state the longest time that the water-tube boilers of any of Her Majesty's ships had been under continuous working at full power at sea without developing defects, and the consumption of coal per horse-power developed during such working. He stated that the longest run under continuous sea-going full power was that of the Diadem in December, 1898, when she was under way for 69 hours for a distance of 1,330 knots, at an average indicated horse-power of 14,268 and an average speed of 19.27 knots. The coal consumption for all purposes was 2.16 lbs. per indicated horse-power. No defects to speak of were developed during the run, and these did not affect the steaming, the power and speed being maintained up to the end. It was futher stated that the Powerful, which left for the China station in 1897, had in the course of her commission gone through speed trials which, though of shorter relative duration, are of equal interest. In a run from Hong Kong to Manila, in March, 1899, she steamed for 27 hours a distance of 540 knots, at an average speed of 20.2 knots, and an indicated horse-power of 19,600. Her coal consumption was 2.6 lbs. per indicated horse-power for all purposes. No defects were developed. In the previous year she had gone through a similiar trial run with equally good results.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co. report the Eastern freight market as follows:

Since our last report we have experienced a sustained inquiry for grain boats, which has resulted in an advance of rates to Cork f. o. to 4s. for April loading, whilst May steamers could readily be placed at 1½d. less. At the moment the demand is no more so pressing, and shippers disinclined to pay over 3s. 10½d. for boats in any position. For large tonnage for picked ports 3s. 3d. is momentarily top rate, or 3s. 1½d. and 2s. 7½d. on a combination of heavy grain and oats. At the Gulf ports charterers appear unwilling to bid on further tonnage, except on the basis of grain charter; fixtures for timber, however, have still been effected on full terms of lately prevailing charters. Rates for time boats have been well maintained, charters applying, however, almost exclusively to special trades, the demand for general purposes not warranting the prevailing rates of freight.

We have nothing new to report in regard to sail tonnage, which remains scarce, with very small offerings. Business in consequence has been very light, whilst rates continue extremely firm and rather favoring owners.

LLOYD'S REGISTER APPOINTMENT.—Mr. S. J. P. Thearle, Principal Surveyor for the Tyne district of Lloyd's Register of British and Foreign Shipping has been appointed by the committee of that society to an important position on the consultative staff at the head office of the society in London. Mr. Thearle has had a long experience as a surveyor of Lloyd's Register and previous to being appointed to the Tyne was for many years in the Clyde district. He is a recognized authority on all matters connected with shipbuilding, and is widely known as the author of several able text books on naval architecture. In other ways Mr. Thearle has also achieved high literary distinction. Possessed of a kind and genial disposition he has formed a large circle of friends, who, will congratulate him on his well merited promotion. It well be remembered that Mr. Thearle visited the Lakes with Mr. Cornish a few years ago, and at that time, he, or rather, they, made a host of friends in shipbuilding, shipowning and kindred circles. The RECORD entertains a warm remembrance of both gentlemen, whom, we may now say are among the foremost in their profession.

DETROIT.

Special Correspondence to The Marine Record.

All along the Detroit river the work of fitting out is going on very rapidly. About 130 vessels, passenger steamers, freighters, schooners and barges, together with a good-sized fleet of the lake boats in the government service, wintered there, and the spring work incident upon them makes the port a very lively one.

Local vessel and lumber men say that never before have the prospects been so bright for a big lumber business along the river front. The Canadian lumber restrictions, which have driven many lumbermen along the lakes to despair of being able to obtain timber, will have small effect in Detroit, whose greatest supply comes from northern Michigan and the Canadian lands owned outright by United States citizens.

For the first time in 10 years the Detroit & Windsor Ferry Co. will not make an early trip up to the Flats. A number of cribs along the channel have been overturned and demolished by the heavy ice coming down the river. Be this as it may, Capt. Gordon is not usually turned down in any project that he embarks on, at least that was my impression after talking to him and we may yet see the Buffalo-Chicago line in full swing.

It is the opinion of Detroit vesselmen that the Chicago-Buffalo line, which John Gordon, late manager of the Northern Steamship Co., is promoting, will never get any further than appearing on paper, at least not while the cost of building vessels is so much above the normal price. They state that when Mr. Gordon was in this city trying to get money for his project, the men with money to invest told him they would not go into any marine scheme when the cost of construction was one- third higher than a year ago.

Lumbermen and the lumber-carrying interests on the great Lakes have awakened to the fact that the Georgian Bay district in Ontario is rapidly killing the lumber business in Michigan. The output of the Canadian camps this season, will be far ahead of the cut in years past, while the Michigan product will be away below the figures of last year, and, in fact, any year of the past decade. The big lumber firms that formerly did business along the lake ports in manufacturing the Michigan and Georgian Bay logs are now transferring their sawmills to Ontario to evade the $2 export duty.

James Scott, president of the Northern Navigation Co., announced that the company had purchased a controlling interest in the Beatty line, of Sarnia, and the vessels of this line will be hereafter operated as a part of the Northern system, which, with the exception of the Canadian Pacific railway steamships out of Owen Sound, is the only line operating from Georgian Bay and Lake Huron ports on the Canadian side. Mr. Scott said the trade was but in its infancy and development would be very rapid. Plans were in preparation for steamers to be built on the Georgian Bay and would be ready in a short time. At least two new steamers, he considered, would be required for this trade in the near future.

The Detroit and Cleveland Steam Navigation line has bought enough stock from the Cleveland and Buffalo line to gain a 50 per. cent. interest in the steamers State of Ohio, State of New York, and City of the Straits, plying between Cleveland, Toledo and Put-In-Bay. Heretofore the ownership of the three vessels was a rather mixed-up affair, the Detroit and Cleveland line owning the City of the Straits and a small portion of the other two, while the Cleleland and Buffalo line had enough stock to make it two-thirds owner. The Detroit and Cleveland line always managed the boats, but the division of the dividends is a matter of difficulty, so to even matters up it was decided that the Detroit and Cleveland line should purchase stock up to 50 per. cent., giving both lines an equal share. The price is not given out, but the papers were made out a couple of days ago.

Work is now on the rush along the river front, no less than sixteen passenger steamers are being fitted out. The Cities of Detroit, Cleveland, Straits, Alpena, Mackinac, Erie, Buffalo and Toledo; the Greyhound, Idlewild, Wyandot, Kirby, Daisy, Hattie, State of Michigan and the Newsboy. Of the United States lake fleet, Detroit is the winter home of the Yantic, Marigold, Amaranth, Haze, Enquirer and Fessenden. Then there are 65 schooners and barges and some 40 freight steamers. At Wyandotte, the yards of the Detroit Ship Building Co., the same rush is on, for there are three steel freighters of the 475-foot type under way. Two of the boats are for the Eddy Bros., of Bay City, and the other is for the Carnegie fleet. The latter steamer is about half completed, and is expected to be ready for launching in six weeks. The Eddy boats are about a quarter built, and they will slide into the water about midsummer.

THE Chicago branch, No. 3, of the Shipmasters's Association, has removed its headquarters from La Grande Hotel to hall C. Schlosson building, No. 206 La Salle street.

DULUTH—SUPERIOR.

Special Correspondence to The Marine Record.

The work of fitting out the winter fleet is now in full swing. About 25 large steamers have wintered here. A dozen or more of these were whalebacks, of the Bessemer fleet. The work of fitting out the Bessemer boats was begun under the direction of Capt. Hunt, of Cleveland.

President J. L. Greatsinger of the Duluth & Iron Range road is one of the close observers who believes that the opening of navigation will be late. There is a great deal of ice in the western end of Lake Superior, but it is heaved and cracked and blue water would show close to the city if a southerly or westerly wind should spring up.

It is expected that the lumber-shovers of Duluth, will demand 60 cents an hour this season. They were paid 50 cents an hour last year, but some of the Lake Superior ports paid 60 cents during the latter part of the season. The lumber-shovers of the head of the lakes fix the rate at the opening of the season and do not change it during the season.

The Merrill & Ring Lumber Co., of Duluth, has purchased the big lake tug John Owen, of Alpena, Mich., from F. W. Gilchrist. The boat will be the largest of her kind in these waters when she comes in the spring. She is 136 feet long, 25 feet beam, and 12 feet deep. The tug will be used for towing logs from the north shore of Lake Superior to Duluth.

The freight market is fairly strong, and 4 cents would probably have to be paid today (Tuesday) for first trip. 4 cents is the asked price and 3¾ cents the bid price. Little or nothing doing, owing principally to the fact that few or no boats are wanted. Such is the situation as sized up by the Daily Commercial Record and I think they are perfectly right as far as I can find out.

The power-house for the new drydock has been finished, as has also the lock proper, so that about all that remains now is to have the approach dredged out and put in condition for work. It is understood that the dredges will begin work as soon as the ice goes out and they can be made ready for the summer's run. It is estimated that it will take about three weeks to get the approach in readiness for work.

The annual meeting of the Davidson Steamship Co., was held at Duluth, Monday, and the following officers were elected for the ensuing year: President, James Davidson, Bay City; vice-president, G. A. Tomlinson, Duluth; secretary and treasurer, James E. Davidson, Bay City. The board of directors is composed of the foregoing officers, with the addition of Mrs. G. A. Tomlinson of Duluth, who is a daughter of Capt. James Davidson.

Capt. Joseph Kidd, of Duluth, has invented appliances which are designed to prevent serious accidents in collision or running aground of vessels navigating rivers, more especially when running in a strong current. His idea is to have a windlass aft, about the same as forward, and with anchors of special design. The anchors are bell-shaped and hollow. Capt. Kidd claims that when a vessel has much headway the suction from the hollow bell will add greatly to the holding power of the anchors.

Charles Maythem, of Buffalo, of the Maythem Towing and Wrecking Co., which operates independent towing lines at Buffalo and Tonawanda, was in Duluth this week. He was entertained by Capt. W. H. Singer. Mr. Maythem declined to discuss the independent tug line which, according to report, he figures on putting in at Duluth. He said that he had simply come here to look at the tug F. W. Gillett, with a view of buying her. The Gillett was built in 1869 at Huron, Ohio, and is quite an ancient craft.

Capt. A. B. Wolvin says that he is not the head of the company which has ordered the six steel canal steamers of the American Ship Building Co. He said his only connection was in the line of shipbuilding. Two of the boats, however, will be built at the Superior yards. Capt. Wolvin is always more than discreet and never asks for or inquires publicity, as a matter of everyday gossip, Capt. Wolvin is a wonderful little man, and not little either, in his capacity, as opposed to stature, but he won't have publicity—or as little as possible.

Charters for wheat from Duluth to Buffalo are now being made at 3¾ cents, and some owners are holding out for 4 cents. This grain rate is equal to about $1.40 on ore. The season rate on lumber from the head of Lake Superior to Lake Erie ports is not yet fixed, but a number of vessels have accepted $3 for the first trips, with others holding off for a $3.50 rate. Shippers offered $2.75, owners confidently expect to get higher rates later. The opening rates last spring was $2, and it soared to $5.25. Few cargoes were placed at the latter figure, however, and the average rate for the season was perhaps $3.75 to $4.

The report that W. A. Thompson was to take charge of the shipyards on the retiring of Manager Ford, has proved to be incorrect, and an official notice has been published to the effect that Mr. Louis William will act in that position. President Wolvin will take the management of the yard and Mr. Williams will look after the construction work. The Bessemer steamer that is now under construction is rapidly nearing completion. About all of the outside work has been finished, the plates have been put in place and the riveting is practically the only outside work left. The men are working on the inside of the boat. It is estimated that the next six weeks will see the boat ready for launching.

The tug firemen of Duluth, are about to organize. H. Nelson, of Chicago, promoter here for the International Seamen's Union of America, called a meeting for last Wednesday evening for the express purpose of beginning the local organization by starting with the tug firemen. The firemen, however, were not disposed to enter an organization in which there would be so many branches of the sailors' calling represented. They claimed that they wanted a union of their own and have since said they will form such a union and get a charter wherever they can. The Cleveland Tug Firemen's union affiliates with the Knights of Labor and the Tug Firemen's union of Buffalo affiliates with the 'longshoremen of that port.

BUFFALO.

Special Correspondence to The Marine Record.

Licensed Tugmen's Protective Association passed resolutions recently, which strongly endorse the building of a marine hospital at this port.

It is stated that Thomas Nihan, of St. Catherines, has sold the steamer Garden City, to Toronto gentlemen. The price paid Mr. Nihan is said to be $45,000.

Maytham, of Buffalo, bought the tug Schenck from J. P. Nagle, the tugs Tuthill and Selby from J. B. Dewey and the tug Porter Lee from George H. Breyman.

All interests are at one in advocating the building of a marine hospital at Buffalo. It is hoped that Congress will grant an appropriation for this purpose at an early date.

Inland Lloyds register, issued this week, seems to shows an increase in valuation from 8 to 25 per cent. The average is between 10 and 15 per cent. The valuations are generally much below the prices made in recent sales.

The Great Lake Transportation Co., which is to run two new, magnificently appointed passenger steamers between Buffalo and Chicago, stopping at intermediate points, will be incorporated this month with a capital stock of $2,000,000.

Navigation opened on Lake Ontario on Monday, with the arrival of the St. Joseph from Toronto at Oswego. She loaded coal and cleared Tuesday for Toronto. No ice of any note was met during the first trips, and the conditions are much in accordance with the reports sent out by the U. S. Weather Bureau.

The canal boatmen are not asking for any grain to carry yet, for the reason that they feel that the low rate they will have to accept in order to compete with the 3 cent all-rail rate to New York can be had when the grain fleet is in from Chicago. Boatmen are saying that they do not expect any direct competition from the roads, as the canal fleet is now so small, not over 1,000 grain boats, that the roads do not consider it a competitor any longer and will make their rate in accord with each other. In this way the canal may get considerable to do.

Capt. John B. Hall and other Buffalo parties bought the wooden steamer New Orleans from the Wallace Bros. and Capt. Edward Cunningham, of Detroit, for $70,000. Other parties were figuring on the boat. The Detroit parties that sold the New Orleans bought the steamer W. B. Morley from C. T. Morley of Marine City. The price was not given out, but is said to be about $90,000. Mr. J. C. Gilchrist, of Cleveland, who seems to have a mania for buying wooden bottoms, offered $100,000 for the steamer Nyanza this week, but the offer was turned down. Gilchrist and his bank, with his large fleet of boats, is becoming one of the principal men in transportation circles, and it appears that J. C. is quite capable of carrying to a successful issue all that he undertakes.

Capt. Tom Williams, the namesake of your Chicago correspondent, has resigned his place as keeper of the life saving station. He is still in charge, but as soon as a successor is named, which will probably be in two or three weeks, he will bid farewell to the duties he has followed for twenty-two years, and to the little house on the light-house pier, which has been his home all that time. He is fifty-six years old and a fine specimen of the rough, sturdy, plain spoken lake-faring man, but in the minds of the doctors he is unfitted properly to perform the work of captain of the crew. His bones are filled with rheumatism as the result of the exposure he has been subjected to in his long service in cold, wet weather, and he could not pass muster with the examiners. Capt. Tom is fairly well fixed and will probably secure some local position which will be better for him than captain of the life-saving station.

W. L. Brown, president of the Chicago Ship Building Co., was here this week, looking for a site for two big drydocks to cost about $400,000. In company with Mr. Brown were J. C. Wallace, general manager of the shipbuilding company; W. S. Fitzgerald, of Milwaukee, and Capt. A. B. Wolvin, of Detroit. Mr. Brown says that it has not been finally decided to build docks at Buffalo, but that a plant is needed to better distribute the tonnage controlled by the American Ship Building Company. Speaking about the present move of the combine, Mr. Brown said: "If we could get a site large enough at Buffalo we would build two docks, one of them 600 long and 18 feet on the sills. With ample room and the drydocks built the natural development would be the construction of shipbuilding plants, as we have done at four other points. I muts say, however, that the chances of a shipbuilding plant going up are decidedly slim at present. The modern docks we contemplate building at Buffalo would cost about $400,000 apart from the land.

THE Canadian steamers Cuba, Melbourne and Arabian, have been chartered to load corn from Toledo to Montreal at 4½ cents. These are the first grain charters this season, for the St. Lawrence route, and may indicate the figures on future charters.

CHICAGO.

Special Correspondence to The Marine Record.

Capt. D. Hutcheson, of Port Huron, is here this week visiting friends.

Capt. Thomas Barry succeeded Capt. Pitman as master of the F. & P. M. No. 1 on Monday.

The steamer City of Louisville on her arrival Tuesday morning went to dry dock for a new Sheriff's wheel.

W. W. Whitney arrived here last week from Duluth to succeed R. Dunham as Sec'y of the Great Lakes Towing Co. at this port.

Capt. W. E. Moore has given the barge Shawnee new bulwarks all around and her topsides and center board box have been calked.

James Elliott, of Saugatuck, is building a passenger steamer 90 feet over all, 16 feet beam and 5 feet hold at Paw Paw Lake for Capt. Lyman Feltus.

The custom's barge office, from April 2nd until further notice, will be open for business from 9 a. m. until midnight. Deputy Collector J. M. Nash is in charge.

Capt. G. E. Benham has given the steamer Isabella J. Boyce a thorough overhauling and some new decks. She has also received new cylinders to her engine.

A. A. Parker, of Detroit, was in this city Monday. He had been enjoying a vacation and sea bathing for two months at Palm Beach, Florida, and will visit French Lick before returning to Detroit.

A fire on board of the steamer J. H. Prentice, under her boiler pan, caused damage to the extent of $825.00, on the night of March 28th, whilst laying at the Soper Lumber Co.'s slip at 22nd street.

Capt. Tom Williams has been giving his schooner Libbie Nau extensive repairs, comprising new decks forward, new ceiling forward and aft, new hatch coamings, new sheet posts and a general overhauling.

Chicago Branch No. 3 of the Shipmasters' Association have given up their hall at the Le Grand Hotel and removed their quarter to Hall C. in the Schlosser Building at the north-west corner of La Salle and Adams streets.

The steamer Edwin S. Tice, Capt. Sam'l. Neff, arrived here with salt from Manistee for Joy, Morton & Co., Friday morning March 30th on her maiden trip this season. She was the first freight steamer to arrive here this season.

The Benton Transit Co.'s steamer Frank Woods arrived here Tuesday morning from St. Joseph on her first trip this season, and commenced running tri-weekly trips Tuesdays, Thursdays and Saturdays at 9 p. m. from Barry Bros.' Dock Co.'s dock to Benton Harbor.

The steamers Ira Owen, Viking and Parks Foster, J. H. Prentice and consorts and Kalkaska have been chartered for corn. Some for Buffalo and others for Port Huron on the basis of 2¾ cents to Buffalo, so report says. It is difficult to obtain actual rates when there is a decline in freights.

The H. W. Williams Transportation Line passenger and freight steamer, City of Kalamazoo, arrived here Tuesday morning from South Haven on her first trip this season. Her officers are, David Morris, master; Charles LaBounty, chief engineer; Georga Hale, purser; Charles Rogers, steward.

The Barry Bros. Transportation Co.'s steamer, City of Grand Rapids, arrived here on the 28th March and was put into service in place of the company's steamer City of Fremont, which has been laid up for repairs. Capt. Edward Evans, the engineers, mates and crew of the Fremont are running the rapids.

The Goodrich Transportation Co. will put the steamer Atlanta on the East Shore route between this port and Grand Haven and Muskegon for tri-weekly trips the latter part of this week. The Atlanta has been laid up at Manitowoc for 75 days and has received a thorough overhauling of hull and machinery and is in splendid condition for the coming season's work.

Local marine men are somewhat surprised to find the name of Capt. Singer of Duluth in the new list of officers of the L. M. & L. S. Trans Co. Mr. Singer, who was president and principal owner of the White Line Towing Co., of Duluth, absorbed by the tug trust, has bought a large block of the Lake Michigan and Lake Superior Co's., stock, and this resulted his election to the position of vice-president.

The Goodrich Co.'s steamer Indiana, which has been in service on the west shore of Lake Michigan all the winter, was laid up Tuesday at Manitowoc for a thorough overhauling and spring outfitting. The company's steamer Iowa, which has been laid up about a month at Manitowoc receiving a thorough overhauling and having her cabins and staterooms redecorated, will replace the Indiana on the West Shore route.

"Our men are not back at work to-day," said General Manager Babcock, of the Chicago Ship Building Co., Monday, "but we expect that everything will be running smoothly by the middle of the week. Some of the men who have resorted to slugging and who have made themselves generally obnoxious will not be taken back under any circumstances, and there is nothing in the settlement agreement which contemplates the taking back of such men. It will probably take several days to restore things to their normal conditon, but we expect to be working as usual by the latter part of the week at the furthest."

Robert B. Wilcox, the city harbor engineer, has compelled the Lehigh Valley Coal Co., to move its dock line back four and one-half feet at Harrision street and the river. This action is only the first of many that are to follow at different points in the north and south branches. It is said that dock owners have driven piles outside their dock lines for repair work, and that this has been done so often that that the river has been materially narrowed at certain places. The property owners will be forced to curtail the docks to their old boundaries.

Apparently there is going to be greater difficulty in getting coal to Lake Michigan ports than there will be to Lake Superior, during the coming season of navigation. There are so few free boats of more than 2,000 tons capacity that have not been chartered for iron ore, that there is considerable doubt being expressed as to whether there is any tonnage worth mentioning left with which to carry either anthracite or bituminous coal in sufficient quantity to fill the docks before the close of navigation. This may appear somewhat pessimistic, but from the information at hand, that is the way it looks just at the present time. It is now quite understood that there was a shortage of soft coal at the head of the lakes last season, and there is no relief in sight for the coming season on account of the increased tonnage of iron ore to move. The sequel is enigmatical.—The Black Diamond.

"I am going to present to the sanitary board a plan outlining what we expect to do in the future," said Trustee Jones. In this I shall ask that the substitution of six or eight center pier bridges by those of the bascule type be made at once, that the river be dredged to a uniform depth of 26 feet, and that it be widened wherever possible to at least 200 feet. These improvements will easily permit a flow of 400,000 cubic feet a minute without creating a current over a mile and a half. It is to be hoped that the tunnels will be sumk to a depth of at least 26 feet when the Union Traction Co., lowers them in compliance with the ordinance that went into effect today. "I am in favor of advertising for bids on six new bridges at once, and I see nothing to interfere with the beginning of active work on them within two or three weeks. Mayor Harison is in favor of giving the sanitary district police control of the river, but will not commit himself positively untll he acquiants himself with the legal phase of the proposed transfer of power. The framing of a set of rules to govern the handling of boats in the river will be one of the first details to be taken up.

William Saville, shipbuilder, has been making extensive repairs on the Soper Lumber Co,'s fleet. Their steamer J. H. Prentice has received new stem, apron knight heads, sheer strakes, all new stanchions, new covering board built solid inside and out, new rail, new decks, promenade deck lengthened 8 feet to give her 40 tons more bunker capacity, new carlings, hatch coamings and chocks, all new bulwarks forward and aft and new spars. She has also had about $2,000 expended on her engine and $600 on her boiler. She will go into dry dock for calking all over. Their steamer Albert Soper is receiving new deck beams and deck, new boilerhouse and coamings around the boiler house, new plates under promenade deck for boiler house, new beam under promenade deck, about 200 feet new stringers, 100 feet new covering board and rail, 2 new planks under stern, and new spars. She will go into dock for a thorough recalking. About $600 has been expended on her boiler and $200 on her engine for repairs. Their barge Halsted is receiving new stern and port bow, 5 strakes of plank on starboard bow and new spars. Their barge Middlesex received one-third new decks, some new outside plank and had decks calked.

CLEVELAND.

Special Correspondence to the Marine Record.

James H. Hoyt, Esq., is one of the leading admiralty lawyers in this city, furthermore, Mr. Hoyt represents very extensive interests. Mr. Hoyt can carry a jury every time, so it is said.

The Mack estate and John A. McGean sold out their interests this week in the steamer George W. Roby. Mr. W. H. Becker will still manage the boat for the new owners A. T. Kinney.

The steamer A. Y. Gowen was the first boat to bring a cargo to this port this season. She entered at the custom house on Tuesday reporting from Kelley's Island with a cargo of stone.

The Bureau of Navigation, Treasury Department Washington, D. C., issued official number this week to the steamer William E. Reis, 4,748 tons gross, and 3,154 net built at and hailing from this port.

The Inland Star Transit Co., which will operate the steamer C. B. Lockwood, has been organized. The officers are: J. C. Gilchrist, president and treasurer; F. R. Gilchrist, vice-president; A. J. Gilchrist, secretary.

President W. C. Farrington, secretary C. H. Keep and counsel Harvey D. Goulder, Esq., of the Lake Carriers' Association are in Washington this week on business connected with the mainteinance of lake levels.

Capt. James Corrigan, of the Lake Carriers' Association, is one of the firmest men affiliated with that body. Capt. Corrigan is positive in his views and never hesitates to express what is for the best interests of the lake marine interests at large.

Vessel men and Lake Michigan coal shippers are still sparring over rates and no business is being done. The owners are holding for 75 cents and the shippers say that they will take their chances on wild tonnage rather than pay that figure.

Mr. Frank G. Bolles, representing the Bullock Electric Manufacturing Co., Cincinnati, O., visited the port this week in the business interests of his firm. Mr. Bolles is energetic and businesslike and is sure to stir up trade in this locality for his house.

The many friends of Mr. Robert Logan, Naval Architect and Consulting Engineer will be pleased to learn that he is gradually recovering from his recent serious attack of illness though it will be some weeks yet before he will be ready to attend to business with his old time vigor.

I hear nothing but regrets this week at the loss of Capt. Thos. Wilson, every one I meet says that no better man ever lived. Probably Capt. Morton the ships-husband for the fleet will now take charge, but, Capt. Wilson can't be replaced, although Capt. Morton is spoken of in every way as an excellent man.

The Detroit & Cleveland line will open navigation between Cleveland and Detroit next Monday, when the steamer City of Detroit, under command of Capt. A. J. McKay, will start on the first trip from Detroit to this port. The steamer will leave Detroit at 9 o'clock Monday morning and will reach here about 4 o'clock in the afternoon. Last year she opened the season on March 27.

There is no let up in the demand for grain carriers, and as offerings of tonnage are light the market is strong. Cargoes are offered freely at Chicago and Milwaukee and at ports at the head of Lake Superior. Two vessels were chartered for wheat at Duluth on Wednesday, to load during the first ten days of navigation at 3½ cents to Midland or 4 cents to Buffalo, shippers' option. The Cleveland owners are holding for the last named rate and they are confident that it will be established before the close of the week.

Another old vesselman has passed away. Mr. Valentine Fries, who has been connected with the lake trade for more than forty years, died at his home at Shinrock, near Milan, Monday night of heart trouble. In the early '60s Mr. Fries built a number of sailing vessels at Fries' Landing on the Huron river. Among the vessels he turned out were the schooners Amaranth, Atmosphere and Marion Page. He built the schooner Golden Age in 1883. She was the largest vessel on the lakes when she came out. He sold the schooner Charles Foster to Mr. J. C. Gilchrist of this city a few years ago. Mr. Fries owned the steamer William Edwards and schooner Golden Age. Before the consolidation of the local drydocks and shipyards Mr. Fries was a large stockholder in the Ship Owners' Drydock Co.

The committee on rivers and harbors will give an important hearing this week on the Sheldon bill, which authorizes the construction of the power canal at Sault Ste. Marie. It will be recalled that the lake marine interests fear that the construction of the canal will lower the level of the water in the ship canal at this point. One hearing has already been held on the question. The engineers for the company, some of them the best known to the profession, are confident that there will no injury result to the marine interests. The Lake Carriers' Association, as well as allied associations, are doubtful. Harvey D. Goulder, Esq., will as usual represent the Lake Carriers' and lawyers and engineers in number will represent the power canal company. It is very probable that the Sheldon bill will be amended so that instead of placing the entire control of the canal in the hands of the War Department a commission will be created, composed of engineers, both of government and civil, who will be on the ground to watch the effect of the turning on of the water in the canal, and will be empowered in the event levels are affected to shut it off without going into court and starting a large legal fight.

The Iron Trade Review says and I have varified their statement, at least in part, that the approach of the navigation season has brought up some questions of transportation charges for settlement. On Tuesday of this week Lake Erie dock managers met at Cleveland and fixed the charge for unloading ore at 22 cents, an advance from 16 cents paid through the greater part of last season. As recently stated, ore shovelers have been advanced to 14 cents for the season of 1900. Since January 1, there has been no rebate on ore shipped to furnaces from the docks. What the rebate on direct ore shall be, if anything, in the coming season is yet to be decided. Though revised tariffs have not been promulgated as yet, the announcement is made of 20 cents advance on ore freights from dock to furnaces in the Pittsburg district, effective May 1, making the rate $1.18, which also applies to the Wheeling district. To the valleys the new rate is 69 cents, an increase of 10 cents over last season. There is a steady movement of ore from the docks and room is being made for the accommodation of larger stocks in the coming season than the docks have ever carried. While the shipment of direct ore is far greater than ever, the prodigious increase in ore handled cannot all be moved direct. The 12 new machines the C. &. P. dock in Cleveland is providing will not be available at the beginning of the season, but they are counted on to add 300,000 tons in the season to the amount of ore handled at this dock. The reports from upper lake ports in the past week are more encouraging than those noted one week ago. At Escanaba the expectation of loading ore on April 20, is now entertained, as against April 29 last year. The indications at Duluth are also rather more favorable. An incorrect figure crept into the statement concerning Escanabe season contracts, in this column last week. All the ore placed from that port has been at $1.

OTHER STEAM TOWING MACHINES.

CLEVELAND, OHIO, March 24th, 1900.

EDITOR MARINE RECORD.—The generous space in a recent issue of your excellent publication devoted to reprinting from the New York Marine Journal an article entitled "Steam Towing Machines" indicates that you consider that subject of interest to your readers.

In their Shaw and Spiegle steam towing machine, so called, the American Ship Windlass Co., have introduced and developed a device of great practical value in the safe, swift and economical handling of tow barges, and they are entitled to due credit and substantial financial returns. It is not often, however, that any one concern can lay just claim to a monopoly of all the intelligence, skill and intimate technical knowledge capable of application to any one industry, and it is not to be successfully denied that the steam towing machines built in Cleveland, by the Chase Machine Co. have given very good satisfaction during three years severe service, and that certain features of their construction are preferred over the other make by captains and engineers who have sailed with both machines.

Your Marine Journal article states that "the first patent that was taken out at Cleveland" "was clearly an infringement" of the Shaw & Spiegle patent, but it is certain that the courts have had the matter under consideration a very long time and have not so decided it, and that the Cleveland manufacturers confidently expect a favorable decision. It is clearly for the interests of the vessel men that no one concern, and in a distant state, should have entire control of this valuable invention unless they are legally entitled to it, and the home company, in contesting this expensive and long drawn out litigation so persistently, should be entitled to fair treatment in marine papers, and the decision of an able and impartial court should not be so recklessly anticipated.

It is the deliberate judgment of Mr. E. H. Whitney, for fifteen years the able and efficient chief draughtsman and later superintendent of the American Ship Windlass Co., of the writer, who served several years as his successor in both of these positions, and of many practical engineers, machinists, and people well versed in patent law, that the steam towing machine now built by the American Ship Windlass Co., is not itself constructed in conformity with any single claim of the Shaw & Spiegle patent. None of these machines now in existence employs any automatically operated pressure regulating valve whatever, any friction driving discs, any adjustable stops, any disconnecting lever, or in fact anything claimed or described in the Shaw & Spiegle patent that distinguishes it from many long familiar and well known hoisting engines.

As a matter of fact, every one of these machines is constructed in accordance with a later patent, granted to me while I was in charge of the drawing room and shops of the American Ship Windlass Co. No criticism is here offered as to the merits of these machines so constructed, as they have proved their excellence in very general use.

With, however, a much wider knowledge of working conditions, a wider experience in marine matters, and I trust a greater skill in engineering problems and machine design, and greatly aided by the practical skill, knowledge, experience, and common sense judgment of my associate, Mr. James L. Chase, I have lately designed and patented an improved form of towing machine, which the Chase Machine Co., is now ready to place upon the market. Several of these machines are now in course of construction under orders from Detroit, Toledo, and Buffalo parties, and some of them will be in service before fall.

As the United States court is a better judge of the infringement charges concerning our earlier patent than the writer of the Marine Journal article before referred to, we suggest that the decision as to whether our later device is constructed with "the most essential feature left out, like a watch without a regulator", be left to parties who will soon be in a position to give the new machines a thorough and impartial test. In the mean time, it might be well to assume that the people who are taking out patents and defending expensive law suits in Cleveland, have a fair working knowledge of their own business.

Thanking you in advance for the courtesy of publication,

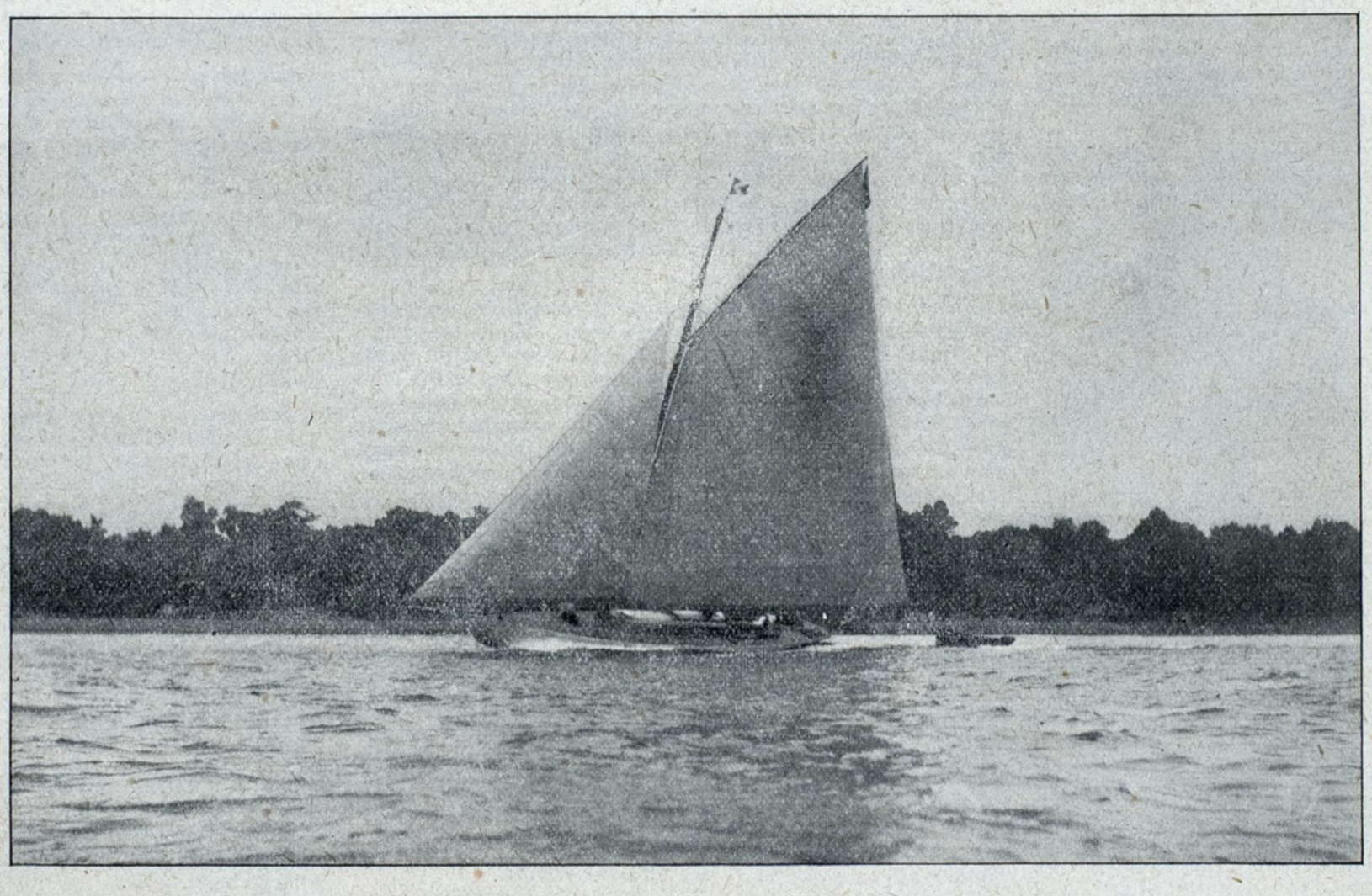
Yours respectfully,

FREDERICK METCALF,

Treasurer, The Chase Machine Co.

LIVED AND DIED TOGETHER.

A pathetic little life story of half a century of devotion was rounded out by death a few days ago, when Capt. Addison King, one of the oldest lake captains in Chicago, died at the German-American Hospital a few hours after his wife's decease. Both were 70 years old and for the last fifty years had lived an ideal life together. Their affections for one another is an old story in the neighborhood of their home on Wrightwood avenue. Ten days ago Mrs. King was taken sick and was removed to the residence of her daughter. An hour later her husband was also taken ill and was sent to the hospital. They continually asked about one another, and both began to fail rapidly, drifting out of life almost simultaneously. Capt. King for some years after he gave up a seafaring life was animal-keeper at Lincoln Park. The last vessel sailed by Capt. King, was the brig Fashion in 1878.



Recently built by the Gas Engine & Power Co. and Chas. L. Seabury & Co., Consolidated, New York.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	292,000	.....	40,000	48,000	304,000
" afloat	82,000	205,000	.....	.....	.....
Chicago	13,634,000	6,358,000	2,101,000	318,000	20,000
" afloat	85,000	4,066,000	549,000	.....	.....
Detroit	418,000	159,000	49,000	7,000	5,000
Duluth	16,482,000	1,254,000	349,000	429,000	199,000
" afloat	248,000	.....	.....	.....	.....
Fort William, Ont	3,429,000	.....	.....	.....	.....
Milwaukee	247,000	3,000	.....	12,000	14,000
" afloat	.....	301,000	1,114,000	.....	.....
Montreal	51,000	12,000	572,000	14,000	30,000
Port Arthur, Ont	209,000	.....	.....	.....	.....
Toledo	637,000	2,287,000	237,000	3,000	.....
Toronto	42,000	.....	4,000	...	45,000
Grand Total	54,204,000	21,558,000	7,556,000	1,197,000	801,000
Corresponding Date, 1899	29,987,000	32,737,000	11,129,000	1,467,000	2,230,000
Increase	111,000	447,000	657,000	6,000	.....
Decrease	..	..	.....	.....	104,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

STEAMBOAT OFFICERS APPOINTED FOR THE SEASON OF 1900.

INLAND STAR TRANSIT CO., J. C. Gilchrist, president.—Str. C. B. Lockwood, Capt. C. T. Gunderson; Eng. Henry Jesson.

THE H. W. WILLIAMS TRANSPORTATION LINE, South Haven, Mich.—Str. Darius Cole, Capt. Chas. McIntosh; Eng. Perry Knaggs. City of Kalamazoo, Capt. David Morris; Eng. Chas. La Bounty. H. W. Williams, Capt. Frank Swails; Eng. Ralph Peterson. Glenn, Capt. L. Cross; Eng. ——.

GRAHAM & MORTON TRANSP. CO., Chicago.—Str. City of Chicago, Capt. William J. Russell; Eng. Wm. J. McClure. City of Milwaukee, Capt. John Stewart; Eng. Chas. L. Barron. City of Louisville, Capt. Donald McDonald; Eng. Byron Burman. Mary, Capt. Wm. A. Boswell; Eng. W. F. Johnson.

LEATHEM & SMITH TOWING & WRECKING CO., Sturgeon Bay, Wis.—Str. Jos. L. Hurd, Capt. R. Cazallis; Eng. H. C. Buckman. T. N. Foster, Capt. Chas. Packard; Eng. Jas. Curry. Pewaukee, Capt. Sam Chesterfitter; Eng. Dick Holt. John Leathem, Capt. Henry Tafts; Eng. Ed. Webber. Geo. Nelson, Capt. James Tafts, Eng. John Riley. Advance, Capt. Andrew Olsen; Eng. ——. Alert, Capt. Abe Eveson; Eng. ——.

LAKE SHORE TRANSIT CO., J. C. Gilchrist, president.—Str. Tacoma, Capt. J. P. Cottrell; Eng. Samuel Moore. Cumberland, Capt. A. Ames; Eng. Frank Ouelbette. Manhattan, Capt. J. C. Dobson; Eng. W. H. Pinkham. Merrimac, Capt. E. L. Ennis; Eng. John Callan. Massachusetts, Capt. W. H. Landgraff; Eng. Henry Mitchell. Hiawatha, Capt. R. J. Walder; Eng. R. O. Butler. Columbia, Capt. M. H. Clark; Eng. John Gaa. Waverly, Capt. H. G. Hayborger; Eng. Chas. Martin. V. Swain, Capt. F. H. Reid; Eng. J. W. Douglass.

GILCHRIST TRANSPORTATION CO.—Str. City of Genoa, Capt. W. H. Blattner; Eng. James Mitchell. City of Naples, Capt. J. P. Minsky; Eng. John Parks. A. P. Wright, Capt. F. A. Goodell; Eng. James Birney. C. W. Elphicke, Capt. B. Moshier; Eng. Wm. T. Schwacofer. Alex. Nimick, Capt. F. A. Graves; Eng. Ed. Reilly. John Harper, Capt. W. C. Butts; Eng. Chas. Gumlick. John Craig, Capt. J. C. Byers Eng. John Seymour. R. E. Schuck. Capt. Charles Hahn; Eng. John Connelly. J. C. Gilchrist, Capt. W. G. Stewart; Eng. C. N. Albee. City of Rome, Capt. John Q. Owen; Eng. A. F. Hogle. John B. Lyon, Capt. A. H. Senghas; Eng. Chas. Willows.

It is expected that there will be about 23,000,000 bushels of grain in store here at the opening of navigation. A much larger proportion of the grain will be wheat than in years past. There will be between 18,000,000 and 20,000,000 bushels of wheat here to greet the first boats. Railroad flour is coming in from Minneapolis to be stored until the boats can take it to Buffalo. There is no flour of local manufacture to send forward owing to the financial difficulties of the United States Milling Co. It is reported that two of the mills will be ordered started up at the head of the lakes on or before the opening of navigation. The coal docks are almost bare. The iron mines of St. Louis county are working day and night to provide stock piles from which shipments will be made to Duluth. Two Harbors and Superior shortly before the first boats arrive to load. There will be a tremendous movement of lumber from the Duluth-Superior harbor this year—possibly 500,000,000 feet. No doubt this amount will be shipped through the season, but considerable will go by rail, owing to the certainty of high vessel rates. A Chicago lumber firm which recently purchased a big block of lumber at an interior town north of Duluth, has already arranged to have the stock shipped all rail. It will pass through Duluth on its way to Chicago. There are about 1,000,000 tons of coal under charter for Duluth at 50 cents.

DECK WINCHES.

(ILLUSTRATED.)

The accompaning illustrations, figures 108 and 109, show the latest style of docking and hauling engine for handling wire lines, brought out this spring by The Chase Machine Co., of Cleveland. These machines are very strong and powerfully geared. The drums are 18 inches long by 12 inches in diameter, with wide flanges, and are loosely mounted on the shaft and controlled by a screw brake and steel locking gear. The cylinders are 7 inches in diameter by 8 inch stroke, and reverse by a patented valve motion. All levers and brake wheels are conveniently located near the steam throttle, and one man can handle both drums readily, without stirring from his position. These winches have met with a very favorable reception. Nearly one hundred of

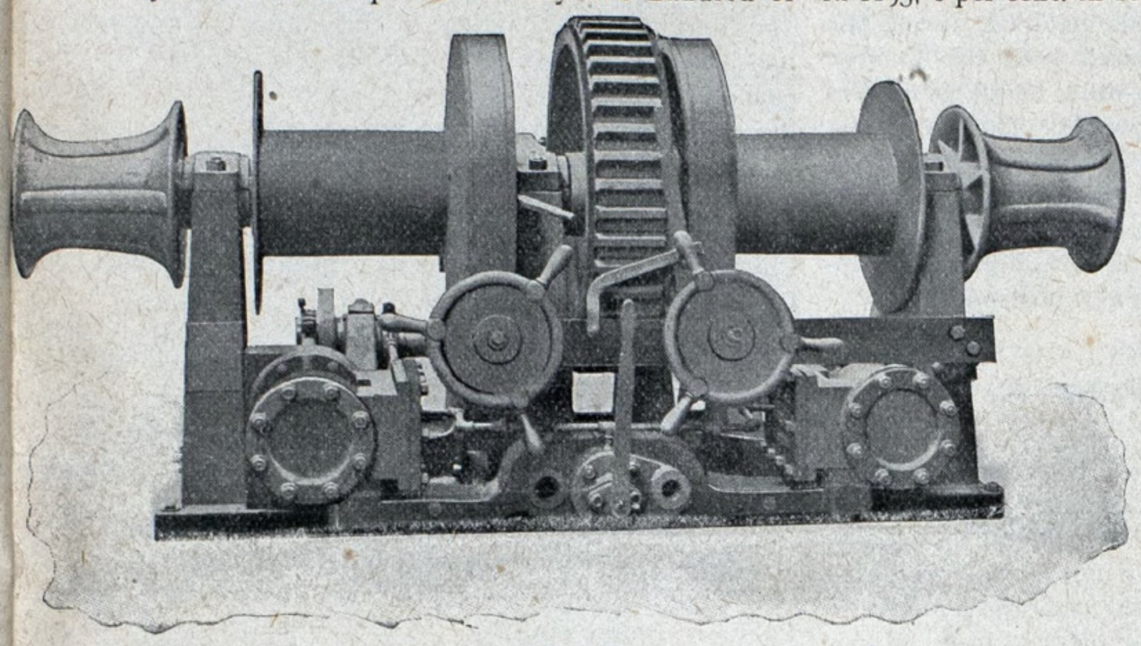


FIG. 108.

these deck machines of various types have been built by The Chase Machine Co., within the last two years, and they are giving general satisfaction to the marine community.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

The total addition of steam tonnage added to Lloyd's register during the year has been 1,242,592 tons gross; and, of sailing tonnage, 33,108 tons gross; or, in all, 1,275,700 tons gross. So large an addition of steam tonnage has not been recorded in any previous year.

About 93 per cent. of the tonnage consisted of new vessels, only two of which, of very small tonnage, have been built abroad. The largest items among the other additions to the Register are those of vessels transferred from British Colonies and from foreign countries to the United Kingdom. These together amount to 80,491 tons, or rather over 6 per cent. of the total.

The gross deduction of steam tonnage from the Register amounts to 722,190 tons; and, of sailing tonnage, to 173,-645 tons; or, in all, to 895,835 tons. About 27 per cent. of the steam tonnage, and 37 per cent. of the sailing tonnage, included in these figures, have been removed on account of loss, breaking up, dismantling, etc.

The tonnage transferred to foreigners during 1899 reaches the large total of 609,589 tons, exceeding the similar figures for 1896, 1897 and 1898 (themselves exceptionally high) by 270,314 tons, 221,795 tons and 21,081 tons, respectively. The steam tonnage which has been deducted on this account, amounts to no less than 505,711 tons, and the sailing tonnage to 103,878 tons, or about 70 and 59 per cent., respectively, of the total deductions in each case. In the main, the vessels which are transferred to foreigners are not of very recent construction. Tables which are included in the Registrar-General's returns indicate that nearly half the tonnage removed from the Register because of foreign transfer had been built before 1885, and more than three-fifths before 1890. During 1899, Spain and Italy have been the largest purchasers. Spain has acquired from the United Kingdom 57 vessels of 116,459 tons; and Italy has acquired 48 vessels of 83,759 tons. Among other principal purchasers, may be mentioned Germany (65,489 tons), Norway (60,906 tons), France (60,791 tons), Greece (36,741 tons), Sweden (35,831 tons), and Russia (30,785 tons). In addition, 21,681 tons have been transferred to the British Colonies. It will be understood that new vessels built in the United Kingdom directly for colonial and foreign owners are not included in these returns.

On the whole, during 1899, the steamers on the Official Register of the United Kingdom have increased by 194 vessels, and 520,402 tons, while sailing vessels have decreased by 389 vessels, and 140,537 tons. The total number of vessels on the Register has therefore decreased by 195, and the total tonnage has increased by 379,865 tons during the year.

During 1899, 687 new vessels of 1,315,469 tons have been classed by Lloyd's Register. Of these vessels, 664 of 1,298,-322 tons are steamers, and 23 of 17,147 tons are sailing vessels. The return shows an increase of 31 steamers of 183,-814 tons, and a decrease of 9 sailing vessels of 6,920 tons, as compared with the similar figures for 1898. The present totol far surpasses all previous records.

98.7 per cent. of the tonnage classed has been built of steel; and about 1.0 per cent. of iron.

Sailing tonnage, which formed 25 per cent. of the total tonnage classed in 1891, 30 per cent. in 1892, 18 per cent. in 1893, 6 per cent. in 1897, 2 per cent. in 1898, forms scarcely more than 1.3 per cent. of the present total.

Among the vessels classed during the year—besides passenger and cargo vessels of ordinary types—are 4 steamers of the trunk-deck type, 5 steamers to carry oil in bulk; 29 yachts; 199 steam fishing vessels (principally trawlers); 22 tugs; coasting vessels, dredgers, barges, etc.

The average size of the steamers classed during the past year is about 1,955 tons, and the sailing vessels about 745 tons.

During 1899, 52 steamers of over 5,000 tons each have been classed as compared with 47 during 1898, 24 during 1897, 31 during 1896, and 17 during 1895. Of these 52, eight belong to Germany; two to Holland; one to Denmark; one to Austria-Hungary; one to Russia; and the remainder to the United Kingdom. The largest steamers included in the return are the "Statendam," 10,475 tons, "Winifredian," 10,405 tons, "Kinfauns Castle," 9,664 tons, "Kildonan Castle," 9,652 tons. Three sailing vessels of over 2,500 tons have been classed in 1899. These are the "Ville de Mulhouse," 3,214 tons, "Emilie Siegfried," 3,214 tons, and "Ville du Havre" 3,215 tons, which have all been built in France.

Of the tonnage classed during the year, 1,195,093 tons, or 91 per cent., have been bnilt in the United Kingdom. Among foreign countries, Italy, Germany and France contribute the largest amount of tonnage.

The return includes a statement showing the countries for which the vessels have been built. 929,898 tons, or 71 per cent., have been built for the United Kingdom, and 385,571 tons, or 29 per cent. for other countries. Germany leads with 69,451 tons; Austria-Hungary has 46,172 tons; Italy, 34,561 tons; France, 34,514 tons; and Norway, 33,439 tons.

SUEZ CANAL TRAFFIC.

During the year 1899, no fewer than 3,607 vessels of 9,895,630 tons net passed through the Suez canal, compared with 3,503 vessels of 9,-238,603 tons in 1898, and 2,986 vessels of 7,899,373 tons in 1897. The 3,607 vessels last year included 2,310 British owned vessels of 6,-586,310 tons, compared with 2,295 vessels of 6,297,743 tons in 1898 and 1,905 vessels of 5,319,136 tons in 1897. The total receipts of the Suez canal for 1899 amounted to 92,515,232 francs, compared with 86,459,996 francs in 1898 and 74,261,661 francs in 1897. In no single month of 1899 was the tonnage less than one million tons gross, and only one month (September) in 1898 showed a less tonnage than a million tons gross. In 1897 only on three occasions was the million tons gross exceded.

The entire season's cut of lumber of the Menominee River Lumber Co., consisting of several milion feet, has been sold to the Enterprise Box & Lumber Co., of Milwaukee. The product will be moved during the coming summer on the steamers John Schroeder and Hilton and the barge Grace Drummond. It is thought that the Hilton will tow the Drummond.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD).

Action for Services—Jurisdiction.—An action for services based on his contract, broken by assault on him by the master of his vessel, a British ship, within the police limits of the United States, may be entertained by the federal court within whose jurisdiction the assualt was made. The Kentigern, 99 Fed. Rep. (U. S.) 443.

Carriers—Contracts for Transportation of Passengers.—Where defendants contract to transport a certain number of passengers for plaintiff, on a certain ship, plaintiff to have the option to send part of the passengers by other ships, and the ship is wrecked before the time for the performance of the contract, defendants, in order to escape liability for the repayment of money paid on the contract, must furnish other ships, equally safe, and with equal accomodations. Turner et al. vs. Barneson et al., 60 Pac. Rep. (Wash.) 54.

Shipping—Discharge of Cargo—Necessity of Lighterage.—A ship cannot be required to submit to being dismantled or mutilated in order to discharge her cargo under a charter, but, where she cannot approach the place of discharge, designated by the charterer without such mutilation, the cargo should be lightered; the liability for the expense of lighterage to be determined by the custom of the port or the terms of the charter. Mencke vs. A Cargo of Sugar ex British Ship Benlarig et al., 99 Fed. Rep. (U. S.) 298.

Seamen—Assaults by Officers—Severance of Contract—Waiver.—Seamen on a British vessel, by making no complaint of assaults on them by their officers, and failing to announce a severance of their contracts of hire at the first port thereafter touched, at which there is a British consul, making such announcement only after the vessel has been some time at the next port, are deemed to have condoned the wrongful acts, so far as they affect continuance of such contracts. The Kentigern, 99 Fed. Rep. (U. S.) 443.

Limitation of Liability—Laches of Petitioner—Terms Imposed.—Although the owner of a vessel allows a court of common law to retain jurisdiction of a suit against him for a maritime tort for several years, during which time he takes all the chances of success before that tribunal, he is still in time, and has the right, by petition to a court of admiralty, to limit his liability, and remove to that court; but that the court, in granting such petition, can require him to pay all costs that had accrued in the common-law proceeding. The S. A. McCaulley, 99 Fed. Rep. (U. S.) 302.

Shipping—General Average—Seizure of Ship as Prize—Expense of Obtaining Discharge.—Libelant chartered a steamship by a time charter, and afterwards subchartered her to a third person, by whom she was employed in trade with Cuba. While so employed, she was seized, with her cargo, by the United States as prize, during the war with Spain, but on trial was released. The owner, libelant, and the subcharterer each refused to pay the expense incurred in obtaining her discharge, for which she was detained, but subsequently, at request of the owner, libelant paid a draft drawn by the master for the amount. Held, that such expense was a subject for general average, to be apportioned between the ship, cargo, and freight, and that libelant; having

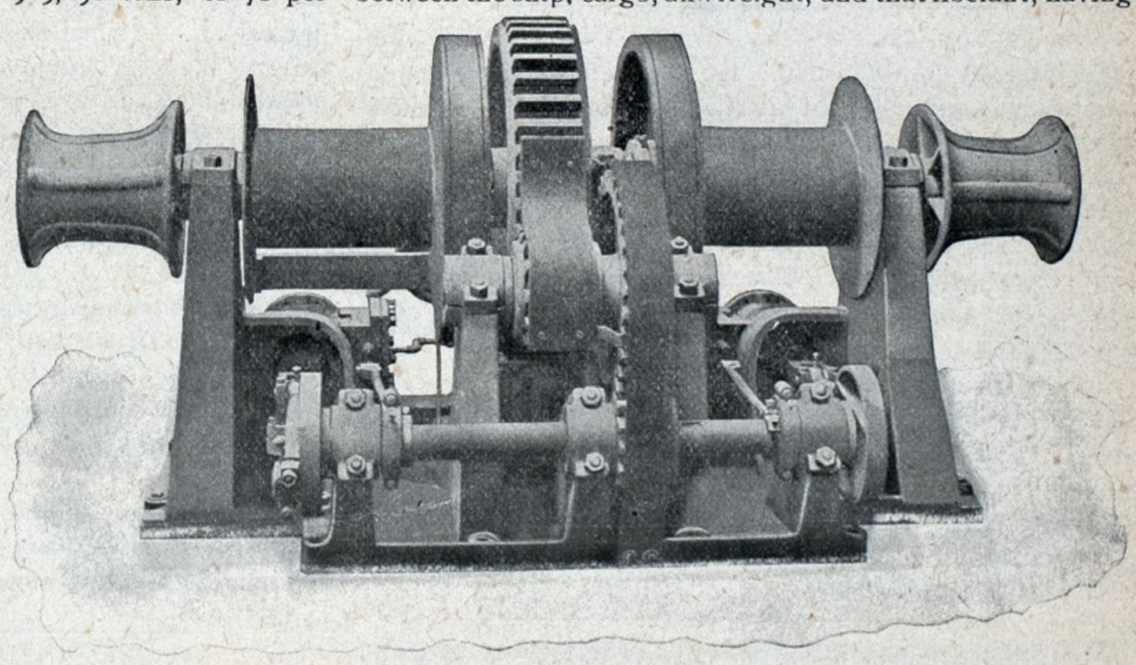


FIG. 109.

neglected to proceed for that purpose until the contributing interests had been separated, could not recover the amount of the draft in a suit in personam against the owner. Woods vs. Olsen, 99 Fed. Rep. (U. S.) 451.

Maritime Liens—State Statute—Notice of Lien.—Under the New York statute (Laws 1879, c. 334), giving a lien on a vessel for repairs made under a contract with the master, owner, charterer, builder, or consignee, or with an agent of them, but providing that the debt shall cease to be a lien unless the lienor shall, within 30 days, file a notice of lien containing, among other things, "the particulars of the debt, and a statement of the account claimed to be due from such vessel," a notice does not contain a sufficient statement of the debt which merely states that a certain amount is due from a vessel "for work done upon the same, materials furnished, and labor and services performed," under instructions from the owner. The Catherine Whiting, 99 Fed. Rep. (U. S.) 445.

MARINE RECORD

ESTABLISHED 1878.

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THE MARINE RECORD PUBLISHING CO.,

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CLEVELAND, O., APRIL 5, 1900.

LIFE saving crews on the Great Lakes will go into service Wednesday. Nearly all of the important stations have been in the care of a single keeper throughout the winter.

NAVIGATION may probably be forced between the 15th and 20th of this month, but careful owners, proceeding to the upper lakes, will hold off for at least ten days longer.

MR. HOYT, Harvey D. Goulder, Esq., and others, who represent the best interests of the lake marine community, support the idea of controlling lake levels. If we all drain, but little can be left.

WE are glad to see that the Lake Carriers' Association are, or is, represented at Washington this week. The lake level question is the order of the moment, and it is being attended to.

HARVEY D. GOULDER, ESQ., is always to the front when lake interests are imperiled. He has the support of the entire marine community in his efforts to conserve what is due to the lakes in transportation circles.

IT IS perfectly mysterious why the Secretary of the Treasury can't, or won't, straighten out that Steamboat Inspection Department of his. The civil service code may hold him up for a brief stage, but startling incompetence can't always exist.

THE RECORD never touches upon politics, but we can't refrain from saying that President McKinley should touch up, his, or rather, the Treasury Secretary, relative to his appointments of Supervising Inspectors of the Steamboat Inspection Service. We can't affort this branch to get rotten any more than any other.

THE thanks of the RECORD are due the Deputy Minister of Marine, Ottawa, Can., for a copy of the tide tables for Charlottetown, Picton and St. Paul Island, C. B., for 1900, with tidal differences for Northumberland Strait; and for the open guif shore from Miramichi along the north coast of Prince Edward Island.

AND now that U. S. Steamboat Inspection Service wants to examine a licensed officer every fifth year. Suppose it examines itself once in a while. The competent of to-day, may be the incompetent of to-morrow, according to their horrible figuring. The locals may be meddling, but the Lord save us from some of the Supervising Inspectors of the United States Steamboat Inspection Service, otherwise ycleped, runners for mechanical journals and fresh water impostors.

REGARDING local traffic and statistics, we note that at the half yearly meeting of the London and St. Katharine Docks Co. it was stated that last year the dock company handled 2,743 ships and 142,000 lighters or barges, which latter had to be let in and out of the docks at all times of the day. The tonnage of the ships was four millions and a quarter, while the tonnage of the lighters was no less than nine millions. The chairman of the meeting said that out of these 142,000 lighters and nine million tons they did not realize one cent, yet, still, they were put to a very large expense in locking the craft in and out of the docks. The total vessel passages last year through the St. Mary's Falls canals amounted to 20,255 as against 17,761 for the year 1898. The total lockages numbered 10,999, or, 1,466 more than in 1898. Now, if bottoms only were taken into consideration, the three canal locks at St. Mary's Falls, handled, during the season, only one in seven, as compared with the London and St Katharine's docks. On the other hand, the figures on tonnage shows 25¼ million tons for the "Soo" as against 13 million tons for the London dock company. Figures such as the foregoing are possible of placing various constructions upon, just in the degree that local tonnage and transportation statistics may be made to appear unduly inflated, and, in some cases, perhaps, quite misleading.

THE FEDERAL GOVERNMENT TO TAKE CHARGE.

Several of the sanitary trustees are in favor of petitioning the War Department to take complete control of the Chicago river. The idea of asking the War Department to exercise the authority vested in it has grown out of the recent discussions over whether the city has the legal right to give to the sanitary trustees police control of the river. Mayor Harrison has just sent word to the trustees that the city can not do this. The opinion has been growing among the trustees that the city does not possess legal control over the river, so, of course, can not transfer it.

"The only power on earth in control of the river is the War Department," Trustee Jones declared. "Time spent in conferring with Mayor Harrison and other city officials on a transfer of control is utterly lost. The city has only such authority over navigation in the river as it is permitted to exercise through the enaction of the federal government. The War Department took charge of all navigable streams in 1892, but since it has failed to police the river and direct navigation the city has continued doing these things. I am in favor of asking the War Department to assume the direction of navigation on the river."

"I do not believe in expending money for improvement if the city is to be above us in authority," said President Boldenweck. "As I understand the matter, the city is in control of the river merely because the War Department has failed so far as to assume its duty or its privilege. I must say that the city is managing the river mighty poorly, too. Why, on a recent trip down the river I saw as many as three boats tied up alongside each other, almost blocking the river. Let the War Department take charge and give us better management."

Trustee Smyth also expressed himself in favor of petitioning the War Department to assume control of the river.

Consulting Engineer T. T. Johnson was appointed on the special commission to draw up rules to regulate navigation. The other members are Maj. Willard and City Engineer Ericson.

Now, let all lake ports give up control of their harbors, and then the Secretary of War must improve them, even to cleaning out local sewers.

WATCH THE "SOO" RIVER.

The enforcement of the rules for the navigation of St. Mary's river is to be more rigid this season than at any time since they were formulated and put into effect. With this object in view Capt. A. B. Davis of the revenue cutter Morrill has received instructions from Washington to station three men at Johnson's Point or Sailor's Encampment, three men at the Hay Lake dyke and three men at what is known as the Island Cut to look out for steamers exceeding the speed limit of the rules and order them check down, and in case of failure to comply with the order to report them. The watch is to be maintained thoroughout day and night, the men working in relays. This information will prove of particular interest to captains who feel inclined to violate the rules whenever an opportunity presents itself.

NEW SHIPBUILDING.

(SPECIAL FROM CHICAGO TO THE MARINE RECORD.)

It is announced here today that contracts have been closed with the American Ship Building Co., for the construction of from four to six ships for a new company which will operate a line between Duluth and Montreal. The ships are to be ready for service next fall.

It is said that one great advantage of the new line will be that its boats need not lay up during the winter, if ocean freights are high. They can load at lake ports directly for European points, and then engage in general ocean trade until spring. It is likely they will be built fully equipped for ocean service and receive insurance ratings that will enable them to sail to any part of the world.

I endeavored to see Mr. Brown, president of the American Ship Building Co., relating to this new contract, also Mr. Babcock, whom I am sure would have given me the exact particulars, but, having missed them for today, will send the RECORD, complete details for next issue.

CHICAGO NAUTICAL SCHOOL.

Each spring, Mr. Geo. L. McCurdy, marine underwriter, Chicago, offers a prize for the most proficient students of the Chicago Nautical School.

The following are the winners of the Great Lakes Register prizes this year: Capt. John Crangle, 1st prize; Mate J. F. Johnson, 1st prize; Mate F. N. Tucker, 2nd prize; Mate J. D. Hallahan, 3rd prize; Mate C. Larson, 4th prize.

The examination this year consisted of the following questions.

1. Define variation, deviation and local attraction?
2. State the general law of magnetism?
3. How do you convert a True Course to a Compass Course? Define each?
4. State where you would find your variation, and how you would compile a deviation card by swinging ship?
5. How often is it advisable to test the accuracy of your deviation table?
6. Define azimuth, also amplitude?
7. How would you work an amplitude?
8. True course from Chicago to Point Betsey is N. by E. ½ E. Variations at Chicago at 3° 20′ easterly, at Point Betsey 1° 30′ easterly, deviation from card for N. by E. is 2° 40′ westerly for northeasterly, is 2° 20′ easterly. What will be the Magnetic Course, also the Compass Course?
9. How would you find a ship's position when sailing within sight of known points of land?
10. If a strange chart was placed before you, what would be your special care before answering any questions?
11. Define Local Mean Time, Local Apparent Time, Central Time, and Equation of Time?
12. State what instruments and publications are necessary for the safe navigation of a vessel on the lakes?

MARINE SHAFTS AND FORGINGS.

Bethlehem Steel Company, whose advertisement appears in this issue, advise us that they are just in receipt of the following letter from the London office of Lloyd's Register of British and Foreign Shipping.

8th March, 1900.

"I have the pleasure to acquaint you that the General Committee, at their meeting today, have been pleased to decide to include your name in the list of manufacturers who have satisfied the committee as to their ability to produce steel, which will comply with the requirements of the Rules of this Society. This decision is subject to all tests with respect to material manufactured by you for use in the construction of vessels, or machinery intended for classification in this Society's Register Book, being carried out in accordance with the requirements set forth in the Rules, and in the presence of a surveyor to the Society; and also to the records kept at your works of the charges, being at all times in such a condition as to admit of each bar or plate being traced to its charge. I am, Dear Sirs,

Yours faithfully,
Signed: A. G. DRYHURST,
Secretary.

The officers of the Bethlehem Company naturally regard this as highly complimentary, although it is only another evidence of the reputation which they have gained as manufacturers of marine shafts and general forgings of undoubted excellence.

THE steamer Petoskey has been chartered by the Pere Marquette railroad system to run in the passenger trade from Milwaukee to Holland, Mich., in connection with the steamer Flint and Pere Marquette No. 4. The Pere Marquette system pays the Hart line $15,000 for the use of the Petoskey for the season.

POPULAR ASTRONOMICAL NOTES.

(COMMUNICATED).

The last March of the 19th century will long be remembered as a record breaker. Even the "oldest inhabitant" can with difficulty furnish a parallel. It will probably long be quoted as indisputable evidence of the wisdom of the mythical "ground hog." Even the legend of the lion and the lamb, generally accepted as infallible, seems likely to be broken to smithereens by this last March of the century. Surely the lion has had more than his share and the poor lamb has been treated with small consideration, though the last half day of the month was grudgingly assigned to him. The fickleness of March renders more noticeable the permanence of the heavens. Mercury will be morning planet during the month and will reach his greatest western elongation from the sun, 27° and 19′, the 21st, nine o'clock in the evening. A search for him in the early morning a few days before or after that date will doubtless be rewarded by a glimpse of the shy planet. Mercury follows the sun so closely that opportunity for satisfactory telescopic observation in the absence of the sun is exceedingly rare.

Venus will continue to increase in brilliancy and beauty during the month, as she continues to lessen the distance that separates her from the earth. At the beginning of the month she will be about 86 millions of miles from us, and at its close a little more than 67 millions, having thus lessened her distance by about 19 millions of miles. April 28 she will reach her greatest angular distance east from the sun, 45° 35′. From that date she will begin slowly to retrace her steps toward the horizon. She is gradually turning her bright face away from us, though she will continue to increase in brilliancy till the first of June. On the evening of April 2d Venus and the crescent moon will be in conjunction and form a beautiful picture in the western evening sky.

Jupiter, in Scorpio, rises too late for observation in the evening, but is in good position for telescopic study in the morning. He will be in conjunction with the moon on the morning of April 18th. At that time they will apparently be separated by only one degree and three minutes.

Saturn is still morning star in Sagittarius, about thirty degrees southeast of Jupiter. April 20th he will also be in conjunction with the moon, Saturn passing but one degree and three minutes south.

All the principal planets are approaching the earth at present.

Two quite large spots were observed toward the western border of the sun's disk. Each was about 20,000 miles in diameter and separated from its companion by 25,000 miles. They were well defined and remained in the same position relatively till they passed from sight at the western edge of the sun's disk about March 12th. From that date the face of the sun was free from spots till the 27th, when a small spot came into view by rotation and is still making the transit of the sun.

D. SATTERTHWAITE.

Toledo, Ohio.

NEW TONNAGE.

Reports for the first nine months of the fiscal year, filed with the Bureau of Navigation, show that excluding unrigged vessels, 732 vessels of 196,148 gross tons have been built and officially numbered compared with 632 vessels of 169,794 gross tons for the corresponding period of the previous fiscal year. The sail tonnage was 73,098 gross tons compared with 55,035 gross tons for the pervious period; steam tonnage 123,050 gross tons compared with 114,759 gross tons.

Our steam tonnage for the year will be almost one-tenth of that launched by Great Britain On the seaboard the Comus 4,828 gross tons was the largest vessel launched. Seven other steamships over 3,500 tons and less than 5,000 tons were launched, all for the coasting trade, including two for Porto Rican trade, restricted to American vessels by military order. Since that order was issued the means of communication between the United States and Porto Rico have been the best, most frequent and most regular in the island's history.

THE new fish tug built at Capt. J. P. Devney's shipyard, Ashtabula Harbor, for the Co-operative Fishing Company, was launched Saturday afternoon.

CAPT. C. H. SINCLAIR'S PATENT PORTABLE HOIST.

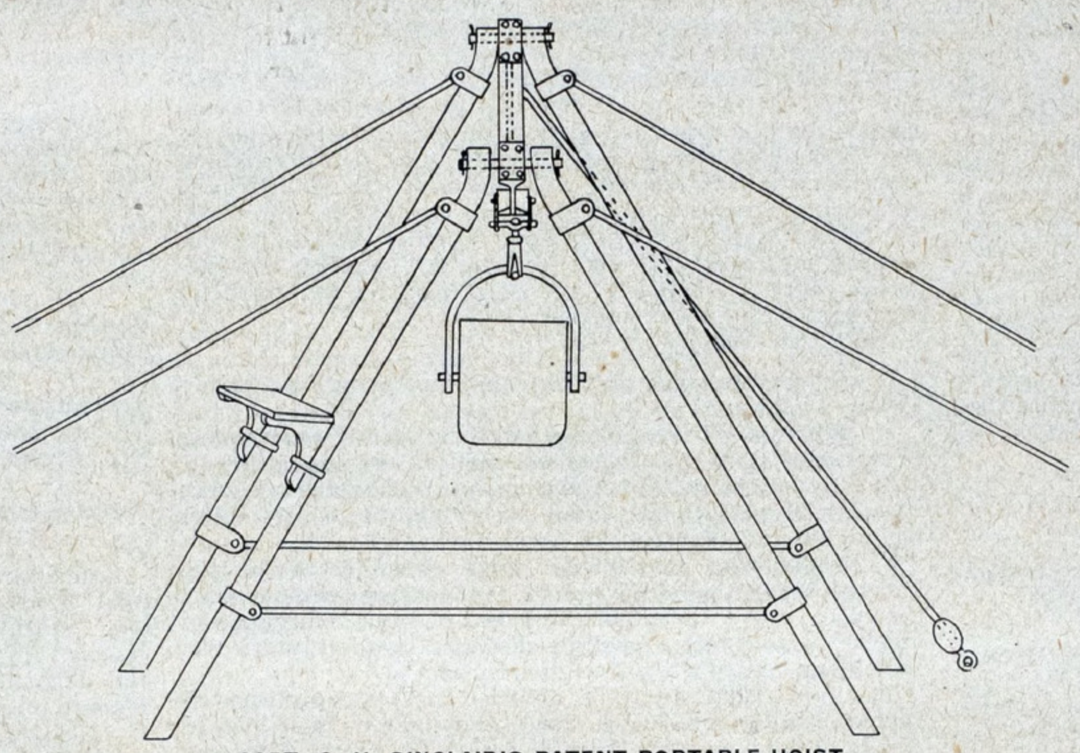
(ILLUSTRATED.)

A drawing of Capt. C. H. Sinclair's patent here presented is a new device designed primarily for the "lightering off" of stranded vessels, but it will also prove of great value to vessels unloading cargoes of coal, salt, etc., at ports or places where there are no facilities for rapid discharge, thus effecting a great saving in the labor account as well as decreasing the period of time required.

The inclined I beam down which the load travels may be obained in any desired length, and of one or more sections. This incline is made available, under all conditions, by the use of the telescoping legs or supports and four guys fitted with turnbuckles render the whole apparatus practically rigid. A one-ton bucket is filled below, and by the ship's own deck engine, is hoisted to the head of I beam where its bale engages the patent releasing hook secured to the traveler. The deck engine then "pays out" and the load travels, of its own volition, down the I beam to the desired point where the bucket is dumped by the one operator, who stands upon a conveniently bracketed scaffold. The bucket is then hauled back to the head of the incline where the patent hook releases the bale and it is lowered again to be filled.

This hoist is so made that it can be folded up, in which state it can be conveniently stowed without trouble.

In case of the stranding of a coal, ore or salt-laden vessel, it can readily be set up in a few minutes and fully manned by the ship's own crew, whereby the ship may be lightered off in less time than, in most cases, is required to get the wreckers alongside, and at only a fraction of the cost of the latter, while in the case of a grain-laden vessel all that is required is a satisfactory vessel upon which to discharge, when, upon the release of the stranded vessel, the lightered cargo may be reloaded by setting up the hoist upon the lighter and proceeding as before.



CAPT. C. H. SINCLAIR'S PATENT PORTABLE HOIST.

It is recognized by marine underwriters as a valuable mechanism and is fully endorsed by them as the only device on the market which enables a vessel in distress to release herself without outside aid and in any kind of weather.

The Salvage Appliances Association of North America, with offices in the Royal Insurance building, Chicago, has been incorporated to handle this hoist.

NOTE—Holes in end of I beam, scaffold and brackets.

THE Maine shipyards are hives of industry. Following is the list of wooden vessels which have been launched so far this year: Five-masted schooner Mary W. Bowen, by New England Co., Bath, 1,907 tons net; four-masted schooner Marie Palmer, by Wm. Rogers, Bath, 1,594 tons net; three-masted schooner Henry Weiler, by H. S. Bowke, Phippsburg, 275 tons net; barge Iowa, New England Co., Bath, about 1,500 tons net; barge Elk Garden, Kelley, Spear & Co., Bath, 749 tons net; tug N. Y. N. H. & H. R. R. No. 13, Bath Iron Works, about 137 tons net; tug N. Y. N. H. & H. R. R. No. 14, Bath Iron Works, about 137 tons net; barge, New England Co., Bath, 800 tons net; five-masted schooner Helen W. Martin, Percy and Small, Bath, 2,020 tons net; three-masted schooner Wellfleet, Cobb, Butler & Co., Rockland, 496 tons net. The totals are five schooners, three barges, two tugs, ten vessels, aggregating about 9,715 tons.

FLOTSAM, JETSAM AND LAGAN.

Around Marinette, Wis., about all the lumber camps have closed for the season, and in the region around Duluth a similar condition exists. The Duluth & Iron Range train which arrived in Duluth on Monday, took into that town 250 men from camps which had closed.

Four steamers now building in England, and which will be engaged in carrying the ore down the lakes, will arrive at Montreal during the early summer, just about in time to pass up to the lakes through the new St. Lawrence canal locks. There are to be twelve of the steamers built, all of them of St. Lawrence canal dimensions—about 258 feet keel and 36 feet beam. It is the intention to send the vessels to the Atlantic for winter service.

Traffic Manager A. M. Nichols, of the Barry line, was in Muskegon last week. With reference to the steamers which the Barrys will operate between Chicago and Muskegon he named the State of Michigan as one and said that the second remained to be selected. Capt. Miles Barry was down east seeking to make additional purchases, and everything depends upon the success or failure of his mission. It is announced to be the intention of the Barrys to run steamers between Chicago and Muskegon the year round.

Edward Patterson has returned from Everett, Wash., where he has been superintending the loading the machinery of the whaleback shipyard there on cars preparatory to shiping it to Collingwood, Ont., where it will be used in conjunction with the establishment of the new steel shipbuilding plant at that point. The machinery loaded ten cars, and it is now in route to Collingwood over the Great Northern via Chicago. There is some very heavy machinery in the plant, one pair of rolls weighing 80 tons.

The steamer Pittsburg will be the name of a handsome new passenger boat uow building at the Collingwood Dry Dock Co. yards at Collingwood, Ont. The boat will be 232 feet over all, 45 feet beam, and have sleeping accommodations for 225 passengers. She is being built for the Windsor, Detroit & Soo line, and will go into commission on her regular run June 26, taking the place of the Carmona, which has been partially dismantled. The vessel is a side-wheeler, built exclusively for passenger service, under the personal supervision of Manager W. J. Brown, of the above line.

John Jacobs, the Washburn lumberman who constructed a saw mill and planing mill last summer, is doing such extensive logging among the islands that he concluded to buy a tug in order to facilitate his work of towing. He has closed a deal with Capt. John Shea for the purchase of the tug Jim Puller, paying $5,000 for the same. Capt. Shea intends remaining in the towing business at Duluth and will buy another tug. With the tug the Boutins bought from the Cranberry Lumber Co. and the one Louis Cartier bought at Ludington, this makes three more tugs for Chequamegon bay.

The current issue of the Syren and Shipping, of London, in an appreciative article on the efforts now being made in the United States to restore American shipping to its place on the high seas, refers to the record trip of the American clipper ship Dreadnaught, from Sandy Hook to Queenstown in nine days, seventeen hours, as a performance "which no sailing ship in the world's history has ever put to shame." Captain S. Samuels, who commanded the Dreadnaught on that memorable voyage, and for whom the ship was built by Governor Morgan and other New York capitalists, is one of the proprietors of the New York Marine Journal.

Capt. J. G. Warren, Corps of Engineers, U. S. A., stationed at Milwaukee, opened bids on Saturday for the charter of a steamer for the lighthouse service. Four propositions were submitted as follows: Steamer America—During April, May, June, September, October and November, $80 per day, and during July and August, $150 per day. Steamer Minnie E. Kelton—At $108 a day straight through the season. Steamer Francis Hinton—At $110 a day without crew, and $137 a day with crew for entire season. Steamer Alice M. Gill—At $27 per day without crew. The proposals were forwarded to Washington without recommendation.

The best vessels of early steamboat days on the Great Lakes were built on Lake Ontario, and it is certainly surprising to note now the power and speed of some of the side-wheelers that were engaged as far back as sixty years ago for the Lake Ontario-St. Lawrence river trade. From an old newspaper clipping it is learned that the steamer United States was built in Ogdensburg in 1831 by a company formed for that purpose and known as the St. Lawrence Steamboat Co., and was launched Nov. 17 1831. This steamer was 150 feet long on deck, 26 feet beam, 10 feet depth of hold, and measured about 450 tons. She had two beam engines, 40 inches diameter and 8 feet stroke. Wheels were 18 feet diameter, 9 feet face of bucket, draught of water 8 feet. She had two boilers on deck—one on each side of her guard forward of the wheel. Her speed was ten to twelve miles an hour. Consumption of fuel (wood) was about 130 cords each trip from Ogdensburg to Lewiston and return. William Capes, of New York, was the ship carpenter, and William Avery, of Syracuse, built her engines. Capt. Elias Trowbridge, of Oswego, was her first commander, and Capt. Bates, from the Canada side, was her sailing master.

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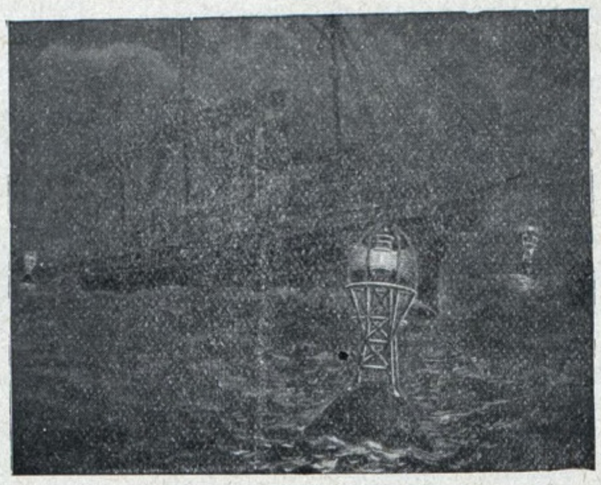

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AWARD OF LIFE-SAVING MEDALS.

The following extracts from acts of Congress, together with "an Act construing the Acts of Congress in relation to the award of life-saving medals," approved January 21, 1897, comprising all existing legislation relating to life-saving medals, are published for the information and guidance of all concerned:

An Act to provide for the establishment of life-saving stations and houses of refuge upon the sea and lake coasts of the United States, and to promote the efficiency of the Life-Saving Service.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

* * *

SEC. 7. That the Secretary of the Treasury is hereby directed to cause to be prepared medals of honor, with suitable devices, to be distinguished as life-saving medals of the first and second class, which shall be bestowed upon any persons who shall hereafter endanger their own lives in saving or endeavoring to save lives from perils of the sea, within the United States, or upon any American vessel: Provided, that the medal of the first class shall be confined to cases of extreme and heroic daring; and that the medal of the second class shall be given in cases not sufficiently distinguished to deserve the medal of the first class: Provided, also, that no award of either medal shall be made to any person until sufficient evidence of his deserving shall have been filed with the Secretary of the Treasury and entered upon the records of the Department.

* * *

Approved, June 20, 1874.

An Act to organize the Life-Saving Service.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

* * *

SEC. 12. That the Secretary of the Treasury is hereby authorized to bestow the life-saving medal of the second class upon persons making such signal exertions in rescuing and succoring the shipwrecked, and saving persons from drowning, as, in his opinion, shall merit such recognition.

Approved, June 18, 1878.

An Act to promote the efficiency of the Life-Saving Service, and to encourage the saving of life from shipwreck.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

* * *

SEC. 9. That the life-saving medals of the first and second class authorized by the provisions of the seventh section of the Act of July 20, 1874, shall be hereafter designated as the gold and silver life-saving medal respectively, and any person who has received or may hereafter receive either of said medals under the provisions of said section, or the twelfth section of the Act of June 18, 1878, and who shall again perform an act which would entitle him to the medal of the same class under said provisions, shall receive, and the Secretary of the Treasury is hereby authorized to award, in lieu of a second medal, a bar, suitably inscribed, of the same metal as the medal to which said person would be entitled, to be attached to a ribbon of such description as the Secretary of the Treasury may prescribe, which may be fastened to the medal already bestowed upon said person; and for every such additional act an additional bar may be added. And the Secretary of the Treasury is hereby authorized, in his discretion, whenever any person becomes entitled to a bar representing a gold medal, to award him, in addition to said bar, such token as it is customary to award him in acknowledgment of the servives of masters and crews of foreign vessels in rescuing American citizens from shipwreck.

* * *

Approved, May 4, 1882.

An Act construing the Acts of Congress in relation to the awards of life-saving medals.

Whereas, the Attorney-General, under date of January 30, 1895, has rendered an opinion that the statutes authorizing the award of life-saving medals apply to the rescue of those persons only who in the vicinity of a life-saving station, life-boat station, or house of refuge, are in danger of drowning in any of the waters over which the United States, by reason of their right to regulate foreign and iuterstate commerce, have jurisdiction, and that the purpose of such statutes is to cause such medals to be bestowed upon the members, whether regular or volunteer, and whether permanent or temporary, of the life-saving crew; and that the terms "succoring the shipwrecked" and "saving persons from drowning," employed in section twelve, Act approved June 18, 1878, authorizing the bestowal of life-saving medals of the second class, were intended to embrace only those persons who were suffering from the perils of the sea, either by actual shipwreck or from being upon or connected with any vessel in distress: Therefore,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that so much of the Acts relating to life-saving stations and the Life-Saving Service approved June 20, 1874; June 18, 1878; and May 4, 1882, as provide for the award of life-saving medals shall be construed so as to empower the Secretary of the Treasury to bestow such medals upon persons making signal exertions in rescuing and succoring the shipwrecked and saving persons from drowning in the waters over which the United States has jurisdiction, whether the said persons making such exertions were or were not members of a life-saving crew, or whether or not such exertion were made in the vicinity of a life-saving station.

Approved, January 21, 1897.

It will be noted that awards can be made only to the following persons:

1. Those who have endangered their own lives in saving or endeavoring to save lives from perils of the sea, either by actual shipwreck or from being upon or connected with any vessel in distress, in the waters over which the United States has jurisdiction, or upon an American vessel.

2. Those who have made signal exertions in rescuing and succoring the shipwrecked, and saving persons from drowning, either by actual shipwreck or from being upon or connected with any vessel in distress, in the waters over which the United States has jurisdiction.

The gold medals are to be awarded to those only who, by extreme and heroic daring, have endangered their lives in saving or endevoring to save lives from the perils of the sea, either by actual shipwreck or from being upon or connected with any vessel in distress in the water over which the United States has jurisdiction, or upon an American vessel; and the silver medals to those only who, in cases not sufficiently distinguished to deserve the gold medal, have endangered their lives in saving or endeavoring to save others from perils of the sea, either by actual shipwreck or from being upon or connected with any vessel in distress in the waters over which the United States has jurisdiction, or upon an American vessel; and to those who have made signal exertions in rescuing and succoring the shipwrecked and in saving persons from drowning either by actual shipwreck or from being upon or connected with any vessel in distress in the waters over which the United States has jurisdiction.

Satisfactory evidence of the services performed must be filed in each case. This evidence should be in the form of affidavits made by eyewitnesses, of good repute and standing, testifying of their own knowledge. The opinion of witnesses that the person for whom an award is sought imperiled his life or made signal exertions is not sufficient, but the affidavits must set forth in detail all facts and occurrences tending to show clearly in what manner and to what extent life was risked, or signal exertions made, so that the Department may judge for itself as to the degree of merit involved. The precise locality, whether within the waters over which the United States has jurisdiction or upon an American vessel, the name of the vessel shipwrecked or in distress, the date, time of day, nature of the weather, condition of the sea, the names of all persons present when practicable, the names of all persons rendering assistance, and every pertinent circumstance should be stated.

The affidavits should be made before an officer duly authorized to administer oaths, and be accompanied by a certificate showing the affiant to be credible person, certified either by the United States district attorney for the district in which the affiants reside, or by the collector of customs of their collection district. If the affidavits are taken before an officer without an official seal, his official character must be certified by the proper officer of a court of record under the seal thereof.

TOTAL COMMERCE FOR DULUTH-SUPERIOR HARBOR FOR NAVIGATION SEASON OF 1899.

DULUTH.

	NET TONS.	VALUATION.
Receipts	1,189,542	$21,304,704
Shipments	6,040,664	59,486,131
Receipts and shipments	7,230,206	$80,790,835
No. of passengers arriving		27,459
No. of passengers departing		24,956
Passengers arriving and departing		52,415

VESSELS RECORDED AT DULUTH.

Entering: Steam vessels, 3,023; sail and tow barges, 788; total vessels, 3,811; registered tonnage, 4,786,507. Departing: Steam vessels, 2,946; sail and tow barges, 805; total vessels, 3,751; registered tonnage, 4,650,558. Total entries and departures, 7,562; total registered tonnage, 9,437,065; average tonnage, exclusive of tugs, 1,363.

SUPERIOR.

	NET TONS.	VALUATION.
Receipts	1,901 883	$18,889,117
Shipments	2,475,999	57,464,014
Receipts and shipments	4,377,882	$76,353,131
No. of passengers arriving		1,589
No. of passengers departing		2,266
Passengers arriving and departing		3,855

VESSELS RECORDED AT SUPERIOR.

Entering: Steam vessels, 1,703; sail and tow barges, 302; total vessels, 2,005; registered tonnage, 2,448,781. Departing: Steam vessels, 1,642; sail and tow barges, 317; total vessels, 1,959; registered tonnage, 2,547,655. Total entries and departures, 3,964; total registered tonnage, 4,996,436; average tonnage, exclusive of tugs, 1,507.

VESSELS RECORDED AT WISCONSIN ENTRY IN 1899.

Entering: 782 vessels, registered tonnage, 755,544. Departing: 784 vessels, registered tonnage, 965,800. Total: 1,566 vessels; total tonnage, 1,721,344.

NUMBER OF ARRIVALS AND DEPARTURES EACH MONTH DURING 1899, WITH NET REGISTERED TONNAGE.
(DULUTH AND SUPERIOR COMBINED.)

MONTH.	Arrivals	Departure	Total.	Registered Tonnage.
April	1	7	8	3,511
May	685	691	1,376	1,786,128
June	812	804	1,616	1,820,179
July	970	945	1,915	2,215,372
August	945	903	1,848	2,121,731
September	727	734	1,461	1,861,670
October	794	755	1,549	2,070,142
November	738	752	1,490	2,216,593
December	144	119	263	338,175
Totals	5,816	5,710	11,526	14,433,501

REMARKS.—DULUTH-SUPERIOR HARBOR.

VESSEL TONNAGE.—The net registered tonnage given was obtained from individual reports of each trip of each vessel entering or departing, made directly to the engineer office, Corps of Engineers, U. S. A.

VALUATIONS.—Valuations of commodities were obtained from the various trade journals, commercial records, and the principal wholesale dealers; are based on average wholesale prices on board vessels for exports, and landed on docks for imports.

The total freight traffic of 11,608,083 net tons shows an increase of 1,480,827 tons over 1898, and the total valuation of $157,143,966 gives an increase of $14,500,946 over 1898, and $62,143,966 over 1895.

CARGO RECEIVED.—The number of tons of cargo received through the Duluth canal was 2,706,295 tons and 385,130 tons through the Wisconsin entry, not including logs. 135,094,000 feet B. M. of logs came through Wisconsin entry,

and * 10,006,000 feet B. M. of logs came through the Duluth canal.

CARGO DEPARTING.—The number of tons of cargo departing through the Duluth canal was 7,187,720; through the Wisconsin entry, 1,328,943 tons.

Average number of tons cargo received per day was 13,383.

Average number of tons cargo shipped per day was 36,869.

The largest cargo departing was 8,256 net tons, carried by the barge Jno. Smeaton, of the Bessemer Steamship Co., an increase of 396 tons over the largest cargo carried during 1898.

The total number of passengers arriving and departing was 56,270, an increase of 6,762 over 1898.

The total number of foreign vessels arriving and departing was 380, with a net registered tonnage of 451,440 tons.

The navigation season covered a period of 231 days from the first arrival to the last arrival from the lower lakes, although the actual open season was much longer, as the local boats from Duluth-Superior harbor continued to run to and from Lake Superior ports up to the 26th of January, 1900.

First boat entered local, April 29, 1899.

First boat entered from lower lakes, May 2, 1899.

First boat to depart for lower lakes, April 29, 1899.

Last boat to arrive from lower lakes, December 19, 1899.

Last boat to depart for lower lakes, December 9, 1899.

Last boat to arrive from Lake Superior ports, local, January 26, 1900.

Total number of entries and departures for January, 1900, was 36, registered tonnage, 2,214; tons cargo carried, 3,532.

*These were railroad ties, telegraph poles, cedar posts, etc, brought in on boats, and not by raft. All rafts are compelled to enter by way of the Superior entry.

ICE REPORT OF THE LAKES.

U. S. WEATHER BUREAU.

LAKE MARINE SERVICE.
DETROIT, MICH., April 3, 1900

SUMMARY OF ICE CONDITIONS.

The reports indicate that that the ice is diminishing over western Superior and more open water is visible, while over eastern Superior the conditions remain unchanged, large fields of ice are shifting with the wind. The ice in St. Mary's river is beginning to soften and has decreased in thickness. In Green Bay the ice is honeycombing and becoming black in the south end. In Lake Michigan the ice-fields have moved away from shore and the harbors are generally free as far north as Frankfort, the ice-fields being confined to the middle of the lake and in the extreme southeast portion. At the Straits the ice has softened somewhat and some thin spots are showing between Sheboygan and Beaver Island. In Lake Huron the ice-fields over the northern portion have moved out into the lake while in the sonthern portion from Harbor Beach south to the mouth there is no water visible. The St. Clair and Detroit rivers are reported open, and the ice is moving freely out of Lake St. Clair. The reports indicate but little ice over the west end of Lake Erie from Toledo to Cleveland, except to the west of the islands; no water is visible from Ashtabula to Buffalo. Under the influence of north and east winds the ice-fields will move down to the west end and have a tendency to become disintegrated so that the pack will not be so heavy at the east end when it moves back.

In comparison with the same period last year, there appears to be less ice over western Superior, and about the same over the east end and in St. Mary's river. In the Straits the ice is not windrowed so heavily. In Huron there is about the same amount. In Lake Erie the ice-fields are confined more to the east end, but on the whole there is more ice now than last year. In Ontario about the same amount.

LAKE SUPERIOR.

Duluth—Harbor and outside ice of dark appearance some open water in the harbor on Duluth side. The outside ice extends up north shore to Knife river and on south shore to the islands.

Bayfield—Ice is breaking up and open water appears outside of Madeline Island; in the harbor and channel the ice is rotting.

Washburn—Conditions are unchanged; ice 20 inches.

Ashland—The ice is beginnig to turn dark and soften.

Houghton—Ice turning black under influence of warmer weather.

Eagle Harbor—The ice extends as far as can be seen.

Pequaming—Snow on ice thawing; no signs of breaking up.

Marquette—The ice in harbor, bay and lake is one large solid field. High south winds will move it out.

Sault Ste. Marie—Ice wearing and becoming dark; weather of last few days favorable for breaking up; ice 23 inches.

LAKE MICHIGAN.

Manistique—No ice in sight.

Escanaba—Ice decreased one inch and softening.

Menominee—Ice from 18 to 20 inches thick and beginning to soften. Ice has pilled up about 4 feet on Green Island.

Green Bay—River open about a mile from the bay; bay ice softening.

Sturgeon Bay—Ice honeycombing fast; not safe to cross channel made by car ferry during the winter.

No ice is reported at any port between Kewaunee and Chicago on the west shore.

Michigan City—Shifting ice-fields in the lake, but no obstruction to fishing tugs.

Holland—Ice in the inner harbor softening; no ice in Lake Michigan.

Grand Haven—Harbor and lake free of ice.

Muskegon—Ice 8 inches thick.

Ludington—No ice in or around the entrance to harbor.

Manistee—No ice in the lake.

Mackinaw City—The heavy ice is softening up from Cheboygan to Beaver Islands and thin spots will open with a few days of warm weather. The top ice is honeycombing.

LAKE HURON.

Mackinaw Island—The warm weather of the past three days is weakening the ice; to the eastward the ice is moving about in broken fields.

Detour—Ice extends to Light-house Point and has not changed materially since last report; all traffic between here and Sault Ste. Marie is yet on the ice; ice 20 inches thick.

Alpena—Northwest winds have taken most of the ice out of Thunder Bay. Ice for about three miles out from Middle Island, much broken up with open water beyond. Ice between Thunder Bay Island and mainland, but none beyond the island; ice-fields can be seen far out in the lake.

Oscoda—Strong westerly winds have blown ice out into the lake; fish tugs have no difficulty in going to their nets.

East Tawas—Ice-fields moving outside the harbor.

Bay City—Ice partly out of the river; floating ice in the bay as far as can be seen.

Harbor Beach—Easterly winds have driven ice-fields on this shore and it extends as far as can be seen; harbor ice quite compact.

Port Huron—No open water in sight in Lake Huron; St. Clair river open to Algonac; steamer Grace Dormer made the trip on Thursday.

LAKE ERIE.

Toledo—No ice in the river and very little reported in the bay.

Put-in-Bay—Ice to the north and west as far as can be seen; is honeycombing fast. Ice moving in south channel and to the eastward of the islands.

Sandusky—No ice in harbor and none can be seen in lake.

Huron—Open water off the harbor; some slush ice along shore but not obstructing navigation.

Cleveland—No ice in harbor; extensive moving fields in the lake.

Ashtabula Harbor—Ice extends as far as can be seen; no water in sight.

Erie—About one half of the bay open; ice softening.

Buffalo—Conditions remain unchanged except a little more open water in the harbor.

LAKE ONTARIO.

Fort Niagara—No ice in sight in the lake except what is passing out of the river.

Sodus Point—Harbor ice badly honeycombed; very little ice in the lake.

North Fair Haven—Harbor ice softening; no ice visible in the lake.

Oswego—Small fields of ice floating in the lake but no obstruction to navigation.

Big Sandy—No change since last report except ice softening some.

NORMAN B. CONGER,
Inspector and Marine Agent.

MARINE PATENTS.

Patents on marine inventions issued Mar. 1, 1900. Reported especially for the MARINE RECORD. Complete copies of patents furnished at the rate of ten cents each.

644,947. Water-wheel. Wilho Ronkainen, New York.

644,955. Anchor. John Watson, Chester, Pa.

645,000. Apparatus for fixing piles in foreshores. J. L. Norris, Washington, D. C., administrator of Edward Case, deceased, assignor to Eleanor M. L. Case.

645,605. Screw-propeller. W. E. Pugsley, Lincoln, Neb.

645,653. Course-finding instrument. C. H. White, Baltimore, Md., assignor of one-half to C. M. Struven, same place.

645,660. Dredging. F. M. Bell, New York, N. Y.

645,689. Drawbridge. Albert Lucius, New York, N. Y.

645,747. Hopper-bottom grain vessel. Lewis Hohmann, Chicago, Ill.

645,807. Boat-propeller. H. D. Guffey, Elko, Mo.

645,856. Screw-propeller. A. B. Kokernot, New Orleans, La.

645,885. Piling. W. B. Bonnell and R. F. Smith, Macon, Ga.

645,941. Pile. G. D. Coleman, Boston, Mass.

645,991. Drawbridge gate. H. W. Yerrington, Oceanic, N. J.

646,181. Apparatus for hoisting or lowering ships' boats. J. H. Klencke, Bremen, Germany.

646,199. Wave-motor. J. C. Walker, Waco, Tex.

646,307. Vessel-indicator. A. L. McCormick, Port Huron, Mich., assignor to B. J. McCormick, Flint, Mich.

646,331. Navigable vessel. H. L. J. C. Turc, Castans, France.

646,338. Current-wheel. James Winter and A. D. Gill, Landusky, Mont.

646,357. Machine for cleaning hulls of vessels. T. W. G. Cook and L. H. Stern, New York, N. Y.; said Stern assignor of one-half his right to said Cook.

646,374. Auxiliary motor for vessels. R. T. Power, New Westminster, Canada, assignor of three-tenths to R. D. Perry, San Francisco, Cal.

646,391. Hydraulic propelling apparatus. F. W. Simmons, Felton, Cal., assignor of one-fourth to W. S. Miller, Oakland, Cal.

Salvage—Seizure—Cargo in Hands of Collector of Customs.—For salvage services in rescuing a vessel and cargo, the latter cannot be libeled and seized so as to dispossess a customs officer holding the same under the customs law. The Marion, 99 Fed. Rep. (U. S.) 448.

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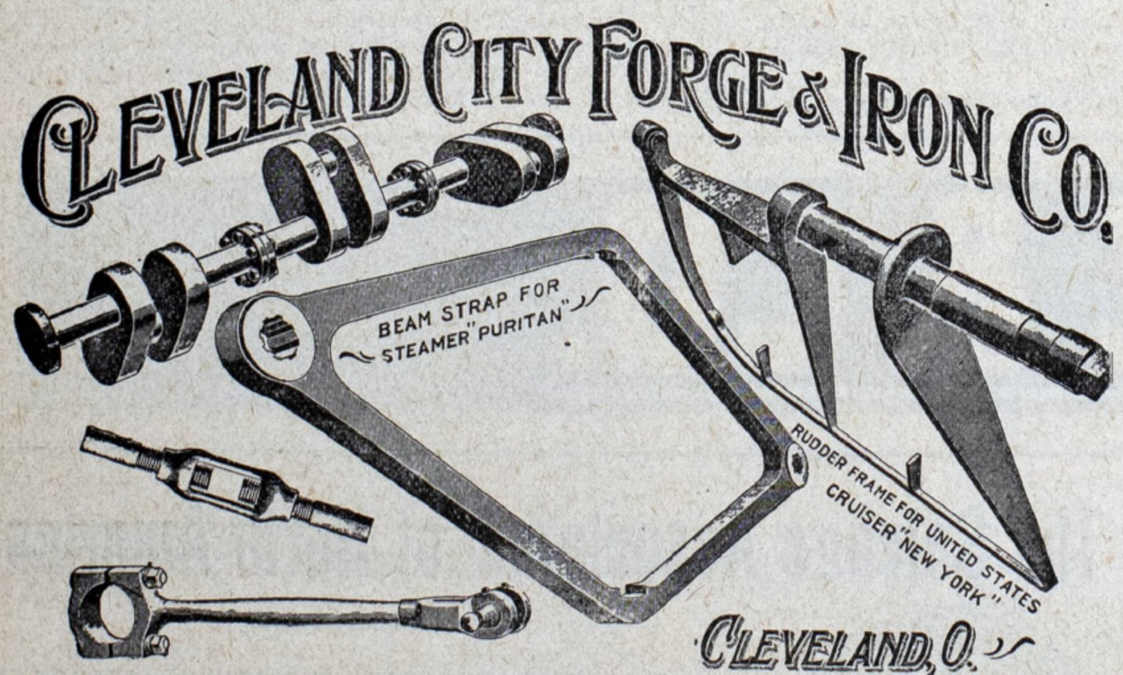

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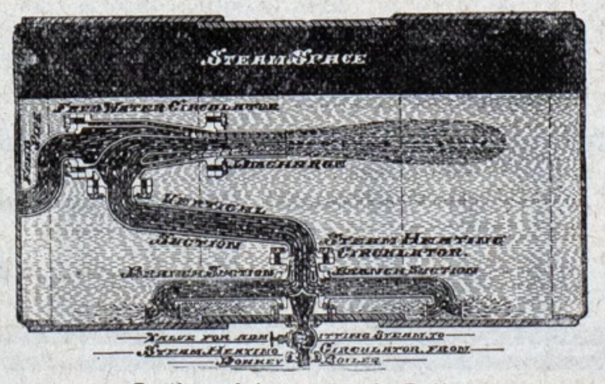

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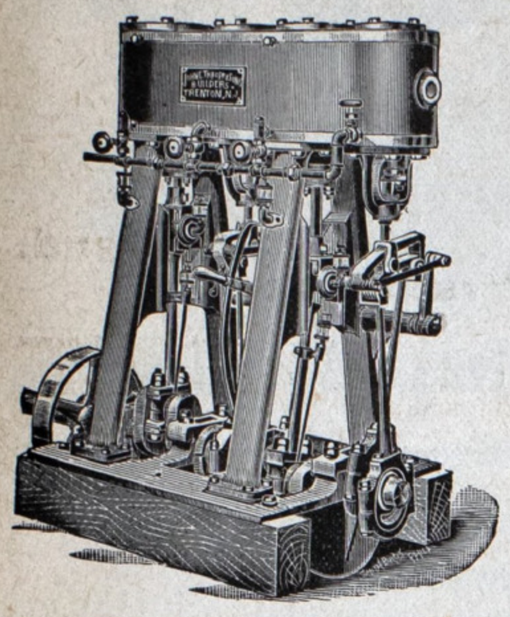

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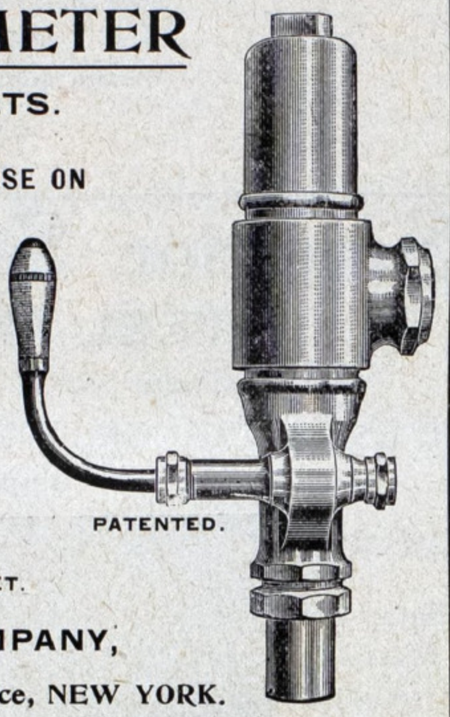

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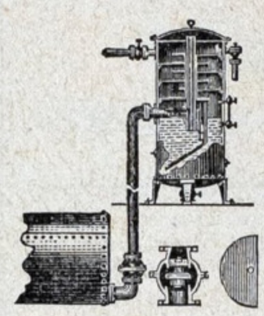

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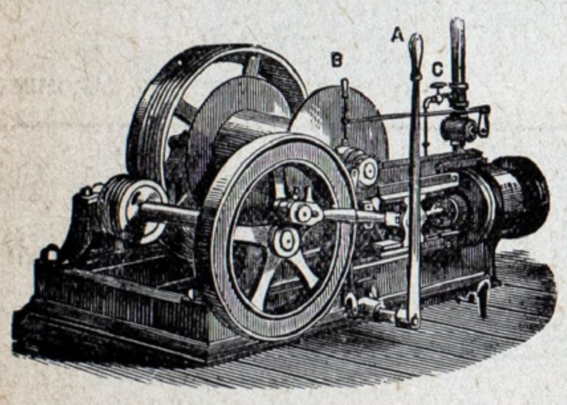

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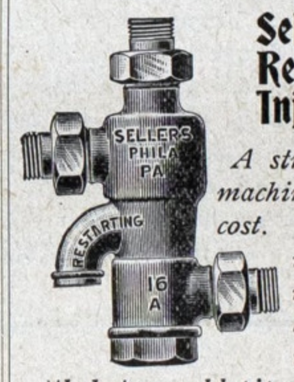

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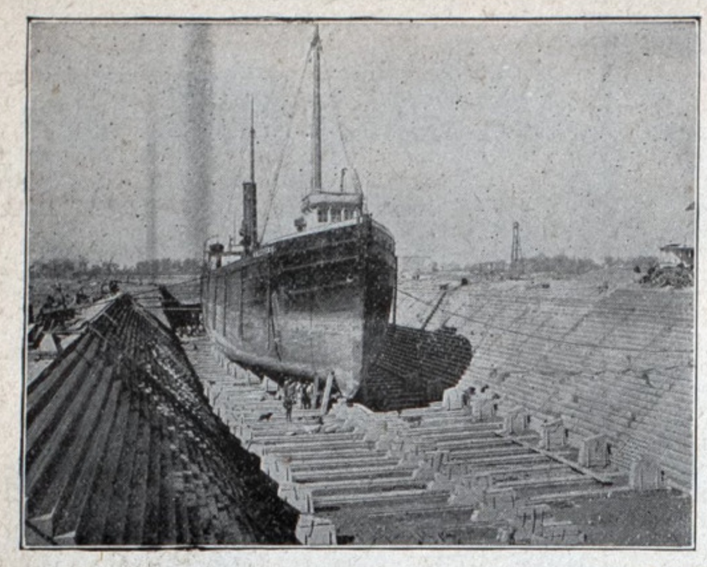

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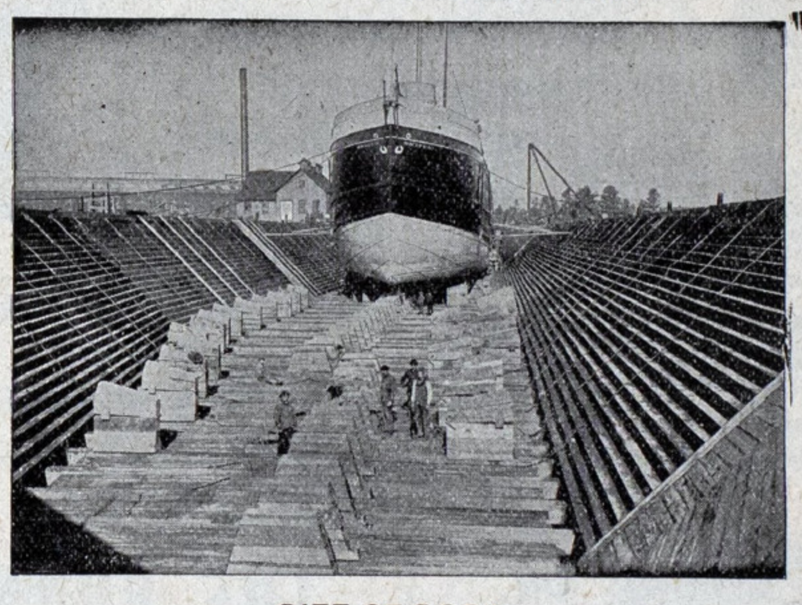

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